JOURNAL

of the

NATIONAL ASSOCIATION *of* CHIROPODISTS

The Official Publication of the Profession

Calcinosis

Podokinetics

Acrylic Nail Plate

Complications of Local Anesthesia

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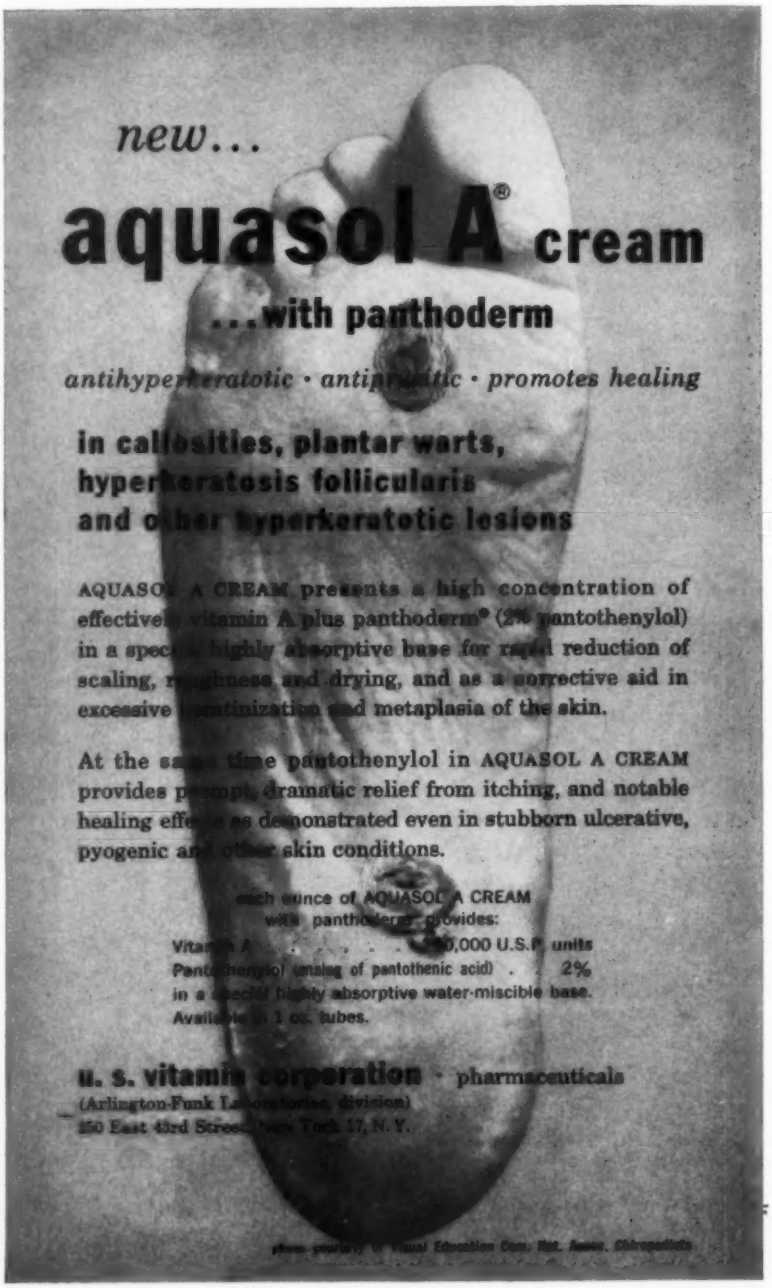
VOLUME 47, NUMBER 8 AUGUST, 1957



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THE JOURNAL

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Manuscripts must be typewritten, double spaced, and an original copy must be submitted. References should give name and initials of author, volume, page, month and year of publication in the case of periodicals, and publisher and place and year of publication in the case of books. Illustrations must be clear photographs. Glossy prints are preferred. Drawings must be made in black ink on heavy paper or cardboard. Any illustrations should bear the author's name and be numbered in the order in which they are referred to in the text. Illustrations must not be pasted on the manuscript. Legends should be placed on a separate sheet. Tables are not illustrations and should be numbered separately.

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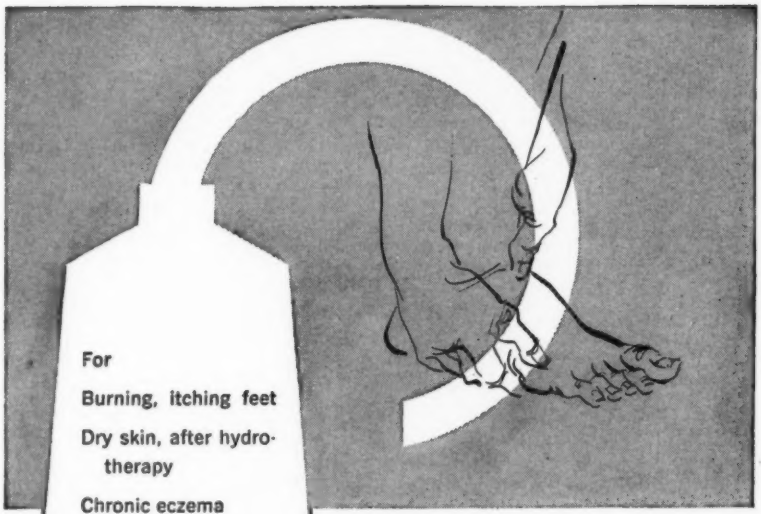

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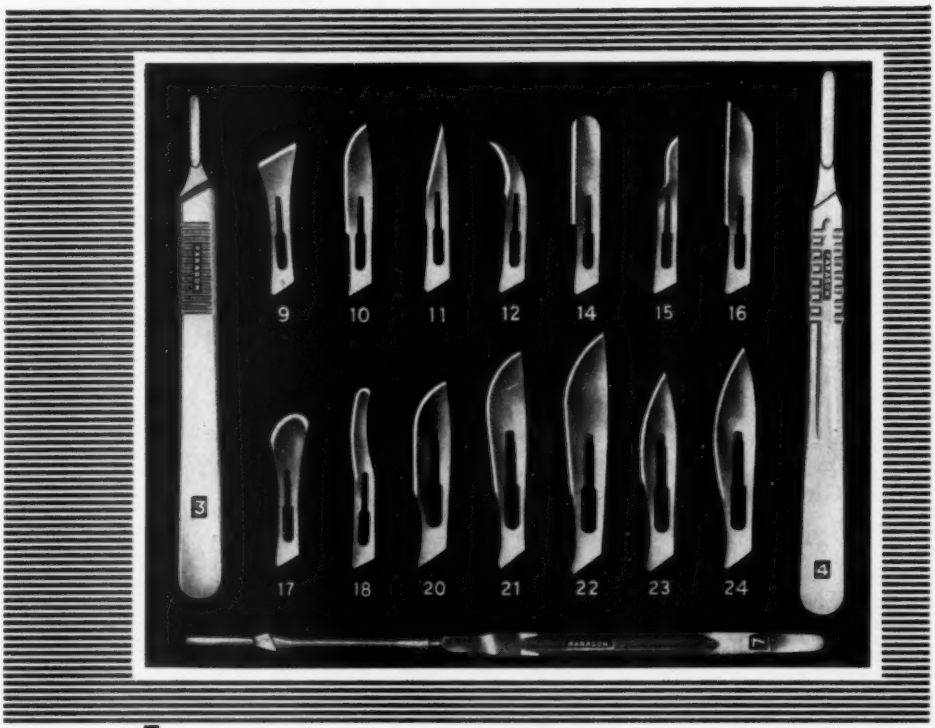

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Connecticut
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The Nevada State Chiropody Board. **Board Secretary:** Dr. William A. Edwards, 150 Chestnut St., Reno, Nevada.

New Hampshire
The next board meeting of the New Hampshire Board of Registration in Chiropody will be held for reciprocity, the second week in December, 1957 at the State Health Building, Concord, N. H. **Board Secretary:** M. Atkinson, M.D., 107 State House, Concord, N. H.

New Mexico
The next board meeting of the New Mexico State Board of Chiropody will be held for reciprocity (upon application) and examination on July 13-14, 1957, in Albuquerque, N. M. **Board Secretary:** Morris Haas, D.S.C., 1301 Central Ave., East, Albuquerque, N. M.

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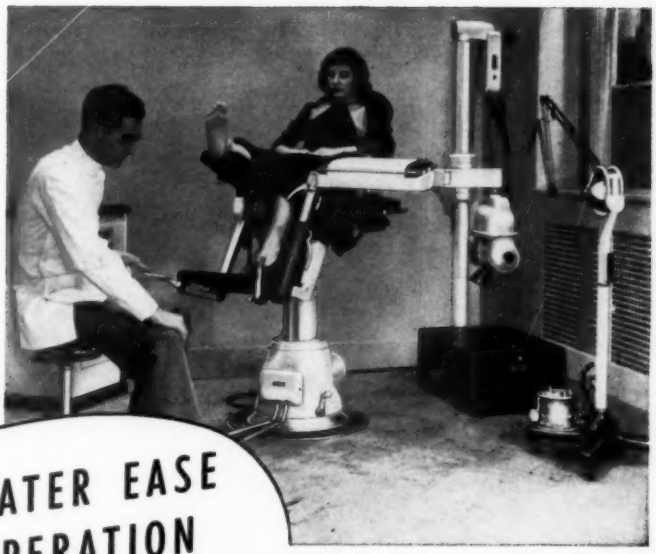

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The Rhode Island Board of Examiners in Chiropody will hold its next meeting for examination on August 21, in Room 366, State Office Bldg., Providence, R. I. **Administrator:** Thomas B. Casey, 366 State Office Bldg., Providence, R. I.

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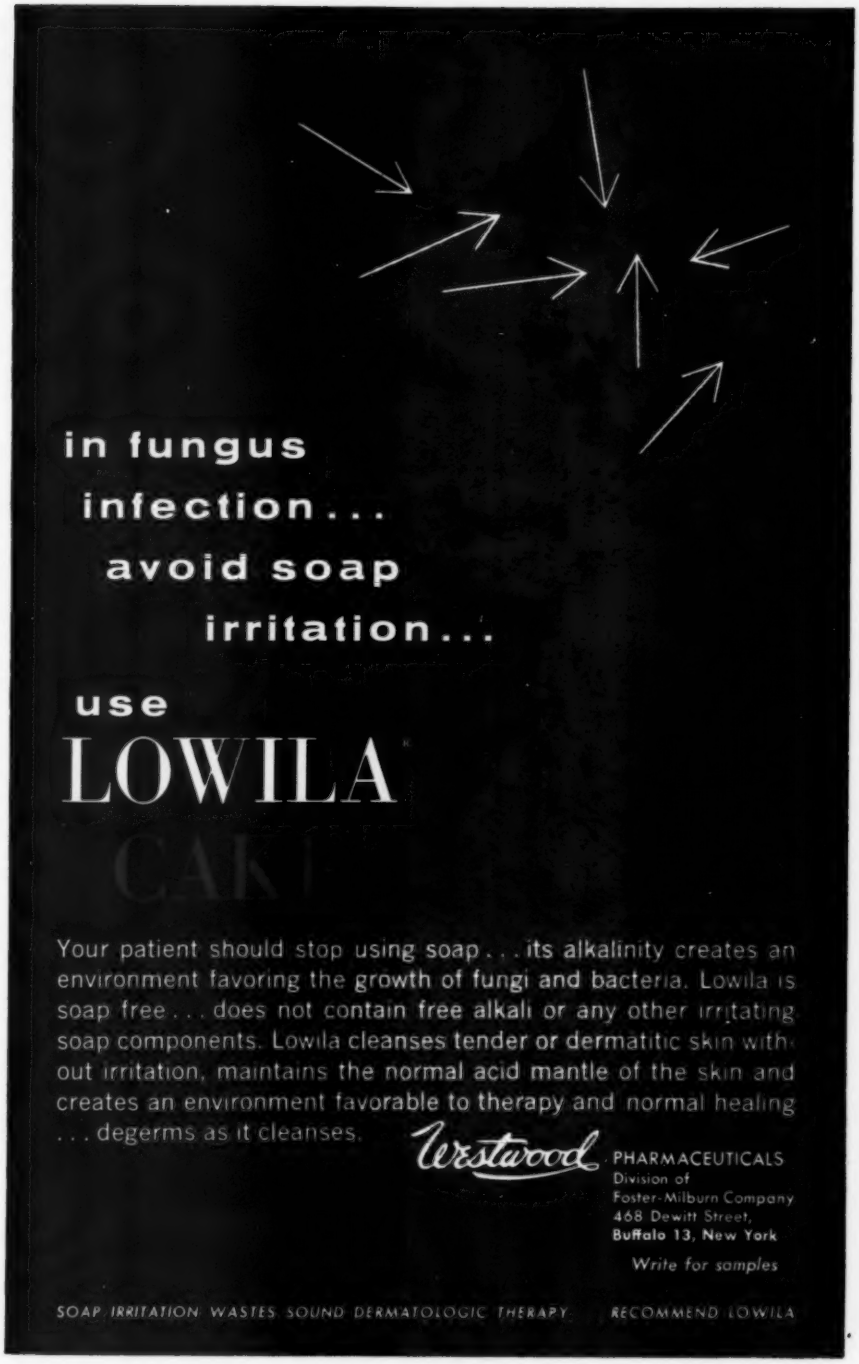
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PODOKINETICS

ALAN K. WHITNEY, D.S.C.
Natick, Mass.

The study of body movements, or kinesiology, has been pursued by the orthopedic professions for centuries, yet a working knowledge of human locomotor dynamics is the possession of few. Lack of understanding of these fundamentals pervades our profession. When the normal podokinetic function is better understood by more of us, fewer of us will be susceptible to the opiation of therapeutic fads. The study of foot movement, in terms of dynamic function, constitutes the basis of applied orthopedics in practice, and, when this subject is more thoroughly explored and used we will be better able to evaluate the new, and frequently erroneous, concepts and techniques.

Authorities are generally agreed that the foot is capable of four basic directional movements which consist of flexion, extension, inversion and eversion. Dynamic consideration involves appreciating the signifiance of these movements during the typical walking sequence.

Several authors have noted that a paired correlation exists between the movements of flexion and eversion; extension and inversion. The basis for this articular synergy has been partially explained by Brachman[1] who cites the combined effect of certain leg muscles whose activity tends to produce both of the associated movements. For example, the tibialis posterior muscle both extends and inverts, while the peronius tertius serves to flex and evert the foot.

Another interesting reference to these paired actions was made by Nutt[2] who describes and illustrates the relation between the combined movements and the articular design of the trochlear surface of the talus. He clearly demonstrates that ankle flexion induces foot eversion while extension prompts inversion.

It is not necessary to offer further evidence of these combined foot movements, nor does it seem likely that an anatomical review of individual joint motions and muscular attachments would greatly aid in establishing this contention. However, if one is in doubt he need only strongly flex and extend his foot to see the connection. It is sufficient if we have established that flexion with eversion and extension with inversion are the two combined foot movements and that a definite anatomical basis underlies this association.

Since we have identified the nature and direction of foot movements, let us now consider the extent of normal range of action. It must be realized that no exact measurements, such as those derived with an arthrometer, can produce anything but

deviation from a theoretical norm. Impressions as to relative joint restriction or hypermobility can be derived through comparison with the other foot, but not with a standard table of normal ranges. The individual range of movement depends largely upon the inherited foot type at hand.

Based on the work of Goldthwaite[3], we can assume that three basic prototypes can be described. The "ectopod" with its relative hypermobility and myasthenia, the "endopod" possessed with minimal joint motion and powerful muscles, and the "mesopod" which represents an ideal blending of virtues of the other two morphologic extremes. The mesopod presents adequate joint range coupled with strong muscles capable of contractural power or sustained tonic action. It is perhaps this last "ideal foot type" upon which the existing concepts of normal motion and function have been developed.

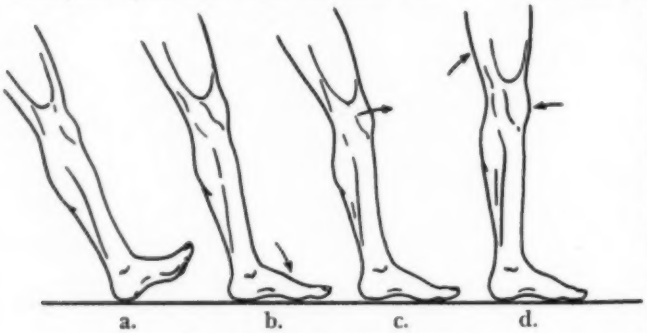


Fig. 1 — Heel Contact Stage

In his book, Hiss[4] has emphasized the normal variations in foot motion. Referring to his classification of maximum and minimum motion varieties, he says "Both of these types are normal and their feet are normal, yet they represent states of being far removed from each other." The ectopodic maximal ranges and the endopodic minimal ranges are not abnormal in themselves, but symptoms may arise when functional demands increase or a local pathology intervenes.

The foot movements we have described, obviously exist for a purpose and we can safely assume that they are more important for walking (dynamic function) than for mere standing (static function). We may consider the walking sequence as divisible for analysis into four main stages, which, in order of occurrence, are 1) heel contact, 2) full contact, 3) propulsion, and 4) free swing.

Heel Contact Stage

Four brief phases mark the heel contact stage of gait. Weight reception commences following the free forward swing when the heel is dropped back to contact the walking surface. At this moment the foot is held in relative flexion (phase 1— Fig. 1a.) but gradual ankle extension then occurs until plantar apposition is made with the ground (phase 2 — Fig. 1b.). The knee momentarily flexes to cushion the impact (phase 3 — Fig. 1c.) and also as a preliminary to subsequent body extension. This assumption of full body extension to columnar posture (phase 4 — Fig. 1d.) is essential to the efficient axial body rotation which follows in the full contact stage. During this stage of heel contact the opposite foot is propelling the body toward and over its area of intended support.

Full Contact Stage

We have divided the full contact stage into three phases which are characterized by distinct postural attitudes. Actually, however, these foot postures are imperceptibly transformed from one to another without any break in continuity.

The stage begins with a position of lateral body rotation over the supporting foot. The arms have completed their swing in this direction and will shortly reverse to incite medial rotation. This axial rotation

involves a column comprised of torso, limb, and talus, the latter being firmly morticed between tibial and fibular malleoli. When the talus is thus in laterally rotated position on the implanted foot, inversion exists to provide a stable base of lateral support for the body which is centered over this area.

Dynamic support, therefore, involves a continuous shifting of foot posture in such a way as to provide and retain equilibrium of the body as it sways or moves purposefully over its supporting area. If the body remained stationary, only one foot posture would suffice for support and balance. This is not the case even though some, who hold that the foot is rigid, might have us believe it.

Returning again to the first phase of full contact, we find the foot inverted, or wound up laterally, with the body weight balanced approximately over the cuboid. In this position the bulk of supportive resistance is offered by the calcaneus, cuboid, and the fourth and fifth metatarsals (phase 1—Fig. 2a.). At this time the contralateral foot is in its final propulsive phase.

As forward body travel with medial rotation occurs, the inverted foot begins "unwinding" toward its midpostural alignment which, as we have noted, represents only a transitional pose enroute to final eversion. This second phase has identity, however, for it is during this period that the opposite foot is lifted clear of the ground. The midpostural phase, as its name indicates, is characterized by a neutral or straight foot alignment. The body has moved forward and medialward to occupy a central position over the foot and we would estimate that the center of body gravity passes over the lateral cuneiform area at this time. Supportive foot resistance during this phase is supplied posteriorly by the calcaneus and anteriorly by the fourth, third, and second metatarsals in rippling succession (phase 2 — Fig. 2b.).

Further medial excursion of the talus is associated with reactive eversion while the contralateral limb carries body momentum with it into its downward arc. Full weight of the body plus downward momentum would strain the now everted foot were it not for the fact that before this can happen the opposite limb enters its upward swing. The upswing phase of the free limb conveys body weight plus momentum off the everted foot and allows initial propulsion to follow. In the everted postural phase the path of the gravitational center apparently crosses over the first and second metatarsal bases. Supportive foot resistance consequently would be concentrated anteriorly in the first and second metatarsal segments and posteriorly in the calcaneus (phase 3 — Fig. 2c.).

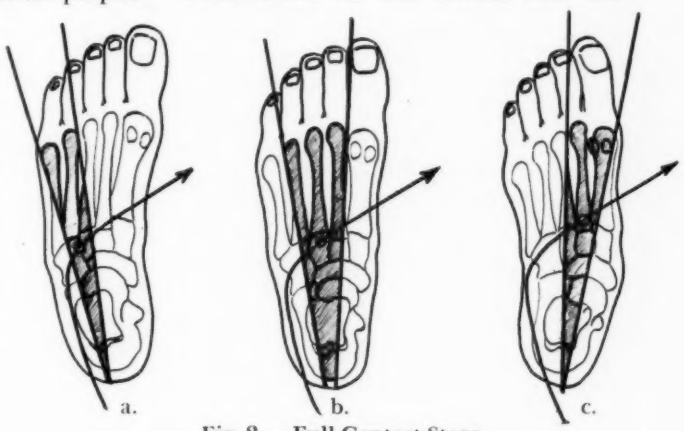


Fig. 2 — Full Contact Stage

It is obvious that we concur with Dudley Morton's[5] concept of foot design, but we must disagree with his implication of unipostural function which is based on the false notion of foot rigidity. Frankel and Henenfield[6] in this regard can be quoted as follows: "Morton, though he too quotes Ellis, was of the opinion that the foot on

weightbearing is rigid. We believe that this concept of Morton's is not consistent with the known facts of foot function, and that the opposite is true — that the foot is flexible and elastic in function."

More must be said of these foot movements and body rotation, for in this complex mechanism lies the answer to many aspects of dynamic function. We have mentioned that the continuous alteration of foot posture, in response to body shifting over its supporting area, constitutes its balancing function. Also closely related to balance is the capacity of the foot to resolve the rotational body movements which occur during full plantar contact. While the balancing function serves to preserve equilibrium of the moving body, the function of rotational resolution permits the torso to change course smoothly from one supporting area to another.

Shock absorbing quality is another function dependent largely upon controlled foot movements. Cushioning devices are necessary during both the heel contact and the full contact stages at which time the body weight is received and accepted until it can be relieved and dismissed during propulsion and free swing. Cushioning mechanisms during heel contact are provided by controlled ankle extension and momentary knee flexion, as previously illustrated.

In the full contact stage, weight plus downward momentum is applied to the foot as the body column rotates in an anteromedial direction. The associated eversion which occurs does more than merely retain equilibrium and resolve rotational torque. Through eversion the foot yields in a medioplantar descent to absorb the weight thrust. At this time, the arch structure is rescued from strain by contralateral limb upswing, which relieves the burden and initiates propulsion by the supporting member. It is of added interest to note that eversion causes medial weight transmission over the main leverage axis (which runs perpendicular to the first and second metatarsophalangeal fulcrum).

Propulsion Stage

As the free limb is swung into its forward arc it carries weight and momentum off the everted foot which subsequently begins active propulsion (phase 1 — Fig. 3.a). Heel elevation with ankle extension over the first and second metatarsophalangeal fulcrum tends to reverse the existing eversion so that at the end of this phase midposture is approached.

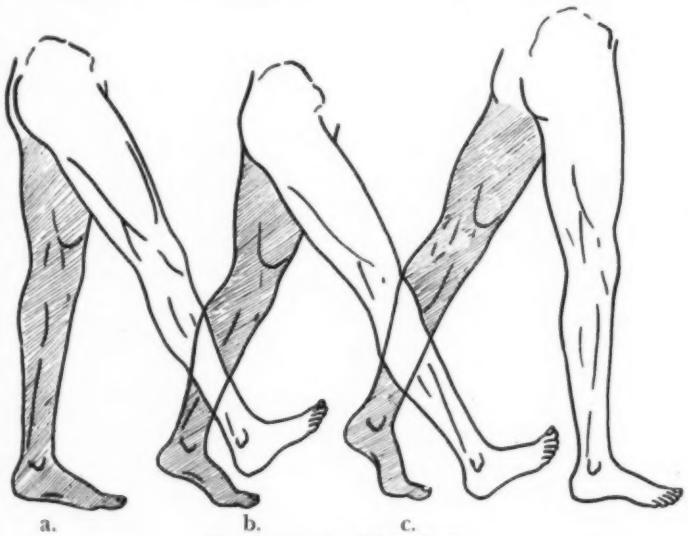
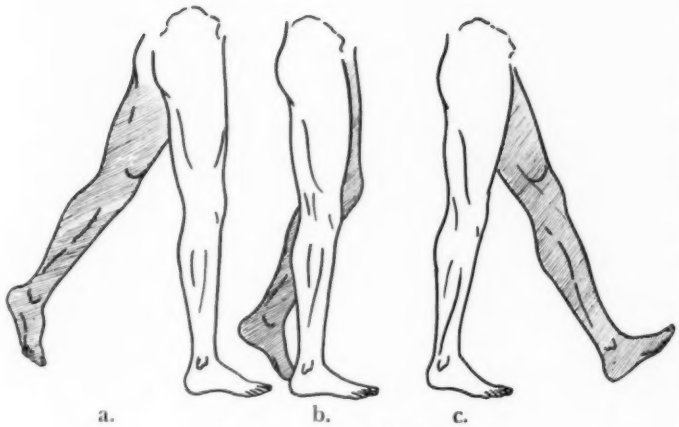


Fig. 3 — Propulsion Stage

Propulsion enters its second phase when initial heel contact is attained by the opposite limb (phase 2 — Fig. 3.b). While the eversion marks the first propulsive phase,



a. b. c.

Fig. 4 — Free Swing Stage

midposture marks the second, and as heel elevation and ankle extension continue into the third phase, inversion is reached.

The final phase is more accurately described as "stabilization" for the body weight is nearly centered over the now inverted, opposite supporting foot (phase 3 — Fig. 3c.). Terminal inversion of the propelling foot has shifted its remnant weight to the lesser toes which compose a small area of final control. If the body mass were to be propelled slightly off course over the newly implanted foot, this last base area of digital control could serve to redirect it onto its proper path.

Free Swing Stage

Three phases mark the free swing stage. The foot we have been observing lifts clear when the supporting foot approaches its midpostural phase of full contact (Lift Clear phase — Fig. 4a.). It swings into its downward arc while the supporting foot everts to absorb the thrust of downward body momentum (Swing Down phase — Fig. 4b.). Entering its upswing phase the limb carries weight and momentum off the everted foot and promotes the initial propulsion (Swing Up phase — Fig. 4c.).

As the swinging limb drops back once again to contact the walking sequence we have completed a cycle of the walking sequence.

Summary

Four basic foot movements have been identified (flexion, extension, inversion, and eversion). That they function in combined fashion has been shown (extension with inversion; flexion with eversion). A detailed discussion of the walking sequence was presented to explain the significance of these foot movements. Table I is an outline summary.

TABLE I

Outline of Podokinetics in Walking

	Left (Right) Foot / *Contralateral Foot*
I Heel Contact Stage (HC) (ankle flexed, ankle extension, knee flexion, full body extension)	PII (mid-propulsion)
II Full Contact Stage (FC) FCI — inversion FCII — midposture FCIII — eversion	PIII (terminal propulsion) LC (Lift Clear) SD (Swing Down)
III Propulsion (P) PI — initial propulsion PII — mid-propulsion PIII — final propulsion	SU (Swing Up) HC (Heel Contact) FCI (Inversion)
IV Free Swing Stage (FS) LC — lift clear SD — swing down SU — swing up	FCII (Midposture) FCIII (Eversion) PI (Initial propulsion)

Conclusion

Foot examination without kinetic appraisal is as absurd as eye examination without testing vision. Nevertheless there is little doubt that kinetic function is commonly neglected or ignored in foot analysis. And, while mechanical foot dysfunction is often associated with static deformities, it is the derangement of foot movements which impairs and limits function. The

(Continued on Page 421)

COMPLICATIONS OF LOCAL ANESTHESIA*

H. L. COLLINS, D.S.C., F.A.A.C.
Columbus, Ohio

The widespread use of local anesthesia administration in chiropody practice has been accompanied by the occurrence of numerous complicating conditions. Many of these complications have not been entirely unanticipated, whereas those of lesser frequency undoubtedly have been unanticipated in many instances.

Prevention

Certainly the best remedy for these complications is the earnest desire and effort of the operator to prevent their occurrence. The great majority of them can be almost entirely eliminated by a thorough knowledge of the anatomy of the foot and tissues, and of the accepted and proven concepts of asepsis and injection techniques.

This is an attempt to review the various types of complications which occur with the use of the local anesthetics; their causes, signs, and symptoms, and methods of their prevention and treatment.

Syncope

Syncope is generally due to psychic causes such as fear and apprehension, which bring the patient to a strong emotional state at the time of the operation. Predisposing causes often further enhance this emotional instability. Some of these are general debility, asthenia, fatigue, insufficient sleep, anemia, and poor room ventilation.

Syncope occurs when a sudden emotional reflex causes a temporary cerebral anemia due to dilatation of blood vessels in the splanchnic area. There is a temporary diminution of cardiac output with simultaneous occurrence of a rapid and feeble pulse, pallor, perspiration, and loss of consciousness.

Treatment consists of placement of the patient's head at a lower level than the rest of the body by lowering the back of the chair or by placing his head between his knees. It is imperative that the chiropodist remain with the patient during unconsciousness lest the patient slip and fall from the chair at this time. Aromatic spirits of ammonia should be administered. When the patient is revived, spirits of ammonia (15 drops in a small cup of water) may be given orally.

Premedication of patients having a syncope history is often an effective preventive measure. Nembutal®[1] (¾ gr.) thirty minutes pre-operatively is recommended.

Pain

The presence of pain following injection may be due to any of the following causes:

(a) Injection into a muscle, ligament or vein.

(b) The use of a non-isotonic solution.

(c) The presence of irritants in the solution, such as preservatives.

(d) The use of a very cold solution.

(e) The use of a contaminated solution.

(f) Injection performed too rapidly, causing sudden tissue distention.

(g) Numerous needle punctures.

(h) The use of dull and/or bent needles.

The prevention of these factors is obvious. Alleviation of pain can usually be accomplished with oral administration of aspirin or A.P.C. tablets (10 gr.) every three hours, or codeine (½ — 1 gr.).

Infections

Infections ranging from those causing mere post-operative soreness to those causing a fatal septicemia may result from departures from aseptic technique. There is, of course, no excuse for even the inadvertent use of a contaminated needle or solution. The injection site should always be painted with a germicidal solution prior to injec-

*Read before Region 3 Scientific Conclave, April 28, 1957, Atlantic City, N. J.

®[1] Nembutal (Abbott)

tion to preclude the transport of potential pathogenic surface organisms into the deeper tissues on the needle. An injection should never be made through an infected area, lest the pre-existing infection be spread into the subjacent tissues. Symptoms of infection are usually made manifest within twenty-four hours after injection.

Paresthesia

Paresthesia, or prolonged anesthesia, results from direct needle trauma to a nerve trunk or from the use of a contaminated needle and/or solution.

Where ethyl alcohol is used for cold sterilization of glass syringes, paresthesia may occur if some alcohol remains in the syringe and is then inadvertently injected along with the anesthetic solution. Interruption of conduction in the nerve at varying periods of time will ensue due to the action of the alcohol. Local anesthetic solutions have not been known to produce paresthesia.

When needle trauma occurs, the patient experiences an immediate hot, flashing pain at the area involved.

If a nerve is pierced or severed by a needle, permanent anesthesia may result, although regeneration with a return of sensation will occur if the severed nerve ends are in an end to end relationship. When a nerve is merely nicked by the needle, sensation will usually return within a few hours or days.

Ulceration

Traumatic ulceration of the skin and tissue may follow injection of an excessive amount of anesthetic solution. Cellular necrosis occurs due to the sudden tissue distention, and ulceration may ensue. One should never use more than 5 cc. of solution for injections.

Hematoma

A hematoma is produced by a misdirected injection in which the needle strikes a vein. Immediate extravasation of blood into the tissue spaces follows and is self-limiting by the pressure produced. The patient should be informed that he will have a "black and blue" mark in the area. Resorption can be enhanced by the use of hot applications on the area.

Factitious Urticaria

This is an extremely rare allergic type response which occurs within twenty-four hours after infiltration anesthesia. The injected area becomes edematous, though there is no concurrent pain or discomfort.

The probable cause is excessive rapidity of injection and/or use of a dull needle which cause (s) tissue trauma and subsequent cellular necrosis in the area. There is probably a transudation of fluid from blood vessels and capillaries due to the liberation of a histamine-like substance from the traumatized tissues.

Preventive measures are administration of antihistaminics, use of a fine gauge needle, slow injection, and use of a high concentration of vasoconstrictor in the anesthetic solution. Changing the type of anesthetic used will not prevent this condition.

Toxic Effects

These are quite rare and are caused by idiosyncrasy or by injection into a blood vessel. The three principal effects are depression or paralysis of respiration, depression of circulation, and the effect on the central nervous system.

Stimulation of a sensory area will render the patient nervous, apprehensive, and garrulous. Stimulation of a motor area will cause tremors or convulsions of a clonic nature. Stimulation of the vomiting center will cause nausea and emesis.

Mild toxic effects are made manifest by the occurrence of nausea, tachycardia, vomiting, dyspnea, restlessness, and excessive talking. Acute toxic effects are made manifest by syncope, respiratory depression or paralysis, and convulsions. Blood pressure drops severely. Death may be imminent unless heroic measures are initiated at once. These are: artificial respiration until

oxygen can be administered, intravenous injection of 0.5 cc. of 1:1000 Epinephrine, and intravenous injection of 1 cc. of Coramine®[2]. When convulsions are present, 0.5 Gm. (7½ gr.) of pentobarbital®[3] should be administered intravenously if possible, or intramuscularly otherwise.

Inadvertent intravenous injections can be avoided by the use of a Luer-Lok glass syringe or an aspirating anestube syringe. The extreme importance of avoiding injection into a blood vessel is apparent from the fact that the lethal dose of anesthetic solution given subcutaneously is sixteen times that given intravenously. Another factor not to be ignored is that toxicity increases in proportion to rapidity of injection.

Tachycardia

The vasoconstrictor content of the anesthetic solution is responsible for this. Patients with histories of angina pectoris or coronary occlusion should never be administered local anesthetic solutions containing vasoconstrictors.

Blanching

Tissue blanching in an area of infiltration anesthesia is due to the vasoconstrictor content of the solution.

Blanching of an area remote from the injection site is caused by traumatic stimulation of vasoconstrictor sympathetic nerve fibers which supply blood vessels of the remote area.

Injection Into Muscle

This results from improper technique and inattention to anatomic factors and is thus readily avoidable. Symptoms which follow are pain, and edema. Pain may persist for several days, as muscle tissue absorbs the solution very slowly.

Broken Needles

These situations are more often due to faulty technique than to faulty needles. When such an accident occurs, the patient must be so informed, and the removal should be performed by an operator experienced in such procedures. It is imperative to be candid about the situation and to refrain from desperate and uncertain attempts at removal, for these cases can easily assume medico-legal stature, especially when the operator tries to conceal the situation.

Several sound precautions for the avoidance of broken needle cases are as follows:

(a) Use only 1½" stainless steel needles, no finer than 5 gauge for block anesthesia.
(b) Discard old or dull needles.
(c) Know the anatomic structures through which the needle will pass.
(d) Locate landmarks with the index finger, and keep the finger on the right spot during injection.
(e) Warn the patient to be absolutely still, but anticipate any movement.
(f) Pass the needle directly and swiftly to the point of injection, so as to minimize the pain of insertion.
(g) Never apply pressure on the needle shaft to change the course of insertion.
(h) Never force the needle through dense tissue not usually encountered in that path of insertion.
(i) Never insert the needle all the way to its hub. Leave at least ¼" of the needle shaft exposed to view.
(j) Never attempt to sterilize a rustless steel needle by flaming, as this destroys the temper of the needle and renders it highly liable to fracture.

Summary

Post-injection complications of the use of local anesthesia in chiropody practice are, for the most part, avoidable when proper knowledge, technique, and precautions are applied. Where such complications do occur or are unavoidable, prompt and judicious treatment and complete

(Continued on Page 419)

®[2] Coramine (Ciba)
®[3] Pentobarbital (Webster)

BASIC DIAGNOSTIC RADIOLOGICAL SIGNS AND SYMPTOMS

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Purpose:

This paper is an attempt to group and discuss certain radiological phenomena, which, if properly interpreted may lead to a correct diagnosis.

Scope:

It is not intended to delve into all the finer details which may appear on a radiograph, for that the reader is advised to consult the references listed. Rather it is intended to group into two major divisions, viz. major and minor, the signs and symptoms which will lead the practising chiropodist along the right direction to a successful conclusion.

A. Major Signs and Symptoms:

1. Density:

Just as temperature varies with systemic infection or local contusion, so does density. In ordinary health, the body temperature remains fairly constant; so too does density of normal bone remain smooth and even. The density of normal cortex provides a standard by which other ca-containing tissues may be compared as being of equal, greater or less density.

Three variations in density from the normal may be seen. *Pyogenic* in which a hazy smoky appearance similar to an underdeveloped film-print which may affect either the surface of the bone or the entire structure. But in spite of the reparative calcification present the cortex remains visible. *Luetic* the cortex is not visible due to the harsh contrasty effect of the reparative calcification being very similar to an overdeveloped film-print. *Tuberculous* is lighter than pyogenic and the reactive calcification instead of occurring directly over the lesion, occurs in bone adjacent to it.

2. Ossification:

Occurs only in growth repair and tumors, all other types of calcium deposition in which bone develops with a cortex and medullary canal are calcifications.

3. Calcifications:

Two varieties of calcification may be seen radiographically. *Inert* or *static calcification* which occurs in subperiosteal injury and presents a smooth outline, fusiform shape, separated and parallel to the cortex by a thin dark line or area, i.e., thin zone of condensation. *Reactive calcification* means uneven irregular deposition of ca salts with no tendency to be separate from the cortex. The underlying bone varies from normal and destruction or erosion may be present—usually signifies infection, but may also occur in tumor formation.

4. Decalcification:

This term holds the same significance in roentgenology that rubor does in clinical medicine. The term decalcification implies loss of density but not of structure, i.e., demineralization or osteoporosis—the osseous texture is still visible on close examination of the radiograph. Three main varieties should be distinguished. *Systemic* decalcification found in senile and/or postmenopausal conditions in which malacia is accompanied by generalized loss of ca salts from the osseous system. Malacia may also be found in starvation, renal rickets and/or endocrine disorders.

General decalcification implies that only one particular extremity is involved or affected by the process such as is usually seen in such conditions as paralysis or circulatory, following a stroke.

Local decalcification—involves a circumscribed area of bone usually indicative of hyperemia due to infection or injury; it

is occasionally present in the early stages of tumors.

5. Loss of Substance:

This is a *passive type of erosion* of which three types may be distinguished. *Atrophic loss* which occurs at the surface presenting a "punched-out lesion" characteristically seen in Gout and Rheumatoid Arthritis.

In contrast to atrophic which has a ragged edge, a *neurotrophic* lesion is smooth with adjacent bone manifesting luetic density. This may be seen in a Charcot joint. A *pressure-type of loss* is saucer-shaped and smooth with a thin marginating line of increased density indicating reaction of bone to pressure. Chronic pressure from a benign tumor may produce pressure loss of substance.

6. Loss of Structure (Cavitation):

This is the *active form of erosion.* When it involves the surface of a bone it leaves a ragged edge and a fading density—it may occur in either infection or malignancy. Cavitation may also occur within the bone rather than at the surface in which case destruction occurs in toto or mass, i.e., all osseous tissue is destroyed.

7. Atrophy:

Atrophy means merely a thinning or *decrease in the cortex* of the bone in contra-distinction to underdevelopment which implies a decrease in the complete diameter of the bone. Five types of atrophy may be distinguished. *Atrophy of disuse* or static atrophy presents slight decalcification and is very common in metatarsal imbalance. *Sudeck's* atrophy is characterized by spotty texture of the cortex due to congestion. *Acute infectious atrophy* is due to the bone becoming decalcified as a result of active hyperemia.

In *pressure atrophy* a saucer-shaped smooth lesion may be seen with a thin line or area of increased density indicating reaction of bone pressure such as is often seen in head of the first metatarsal due to shoe pressure. *In neurotrophic atrophy* there is to be seen a very marked decrease in total transverse diameter of the shaft with increased density of the cortex equal to that of luetic density. This type is common in paralytic conditions or any condition affecting muscular control and tonus.

8. Hypertrophy:

Hypertrophy is recognized by an increased thickness in the cortex of the bone. It often exists in a bone adjacent to one undergoing atrophy. Hypertrophy is a very common symptom of strain and overloading of a metatarsal segment.

9. Expansion:

Expansion implies increase *bilaterally* in the cortical diameter and is usually accompanied by lack of structure, wherein the bone is abnormally broad, but thin and intact. *Expansion in any lesion not accompanied by active destruction is not malignant!*

10. Striation and Fasciculation:

In normal bone the texture or bony trabeculae are not definitely visible; however in abnormal conditions a visible pattern of striation may be seen. Fasciculation consists of coarse trabeculae with large spaces in between and a criss-cross pattern in both the cortex and medullary canal of the bone. Fasciculation is characteristic of osteitis deformans, i.e., Paget's disease.

11. Rays:

Calcification that presents the appearance of a shaft of sun-rays lying perpendicular to the cortex may be seen in some tumors. Whenever such rays are to be observed they are clearly *pathognomonic of a malignant tumor.*

12. Transformations:

In the presence of active hyperemia, whether by infection or trauma, absorption is predominant and thus bone becomes decalcified. If circulation is dimin-

ished, absorption is decreased, bone trabeculae become more dense or sclerotic. Again when stresses are increased accretion becomes predominant, ca salts thicken and bone or cortex becomes hypertrophied; the reverse and the cortex atrophies.

Transformations in bone due to stresses or circulation are considered as normal or physiological since they follow physiological laws of function.

Pathological transformations are fasciculation, fibrocystic degeneration, osteochondroses, Sudeck's atrophy and the various forms of decalcification.

B. Minor Signs and Symptoms:

1. Joint Spaces:

Loss or diminution of motion results in underdevelopment; the converse results in overdevelopment of the joint-spaces. Cartilage deficiency, edema, tumor, deformity or displacement may lead to increased joint-spaces. On the other hand underdevelopment (both local or general) atrophy and/or destruction of cartilage and deformity of bones lead to decreased joint-spaces.

2. Condensation vs. Sclerosis:

Condensation implies a very harsh density, very much like an overdeveloped filmprint as a result of obliteration of the medullary canal by lime salts. On the other hand, sclerosis or eburnation implies that the trabeculae per se have become abnormally dense but the bony framework or components may be readily distinguished. Condensation is considered a pathologic condition found in neurological degeneration and pressure atrophy. Sclerosis is compatible with health and is usually associated with excessive stress conditions in our practices.

3. Non-reticulated Areas:

This seems to be a lesion consisting of an island of compact bone in the body of an otherwise normal bone; the transition is sudden and sharp. This is often mistaken for serious pathology, but is rarely of any great significance.

4. Fibrocystic Lesions or Areas:

The reparative calcification which follows osteochondrosis produces a polylocular cystic lesion sharply circumscribed by a border of dense condensation. These areas often become the site of degenerative arthrosis such as in hallux valgus, wherein the medial side of the first metatarsal head often manifests fibrocystic lesions due to chronic shoe irritation or faulty foot mechanics.

5. Lack of Substance and/or Structure:

In both these conditions there is a localized absence of bone; the transition is sudden and sharp. Lack of substance implies loss at the surface and lack of structure within the bone per se. Benign cysts and abscesses fall within this category. The *chronic subperiosteal abscess* is particularly drawn to the attention of chiropodists since it is so often missed. Often oblique or angle projections are required to observe this lesion which occurs in the osteoperiosteal layers of the bone.

6. Loculation:

A tumor in bony tissue may appear to be divided by a thick dense line into two or more divisions. This division is called loculation. It is common in benign lesions, particularly giant cell tumor, and amongst malignancies that have undergone malignant degeneration after first having been benign.

7. Transverse Lines:

Apparently all diseases which produce malnutrition are also capable of altering fibrous bone formation and thereby producing transverse lines in the ends of the growing shafts.

8. Maturation of Skeleton:

Reference to any standard schedule of

ossification will provide the practitioner with the normal periods for bone appearance in the lower extremities. Deviation of 10% in either direction from the average lies beyond the normal and should be so considered.

The schedule of maturation is delayed by common contagious diseases, allergic attacks, G-I disorders, upper respiratory infections and hypothyroidism.

C. Summary:

1. A brief synopsis has been presented of the chief radiological signs and symptoms by which the practising chiropodist may readily arrive at a correct diagnosis in a good many cases; and certainly to clarify in his mind, when the condition is primarily "orthopaedic" and when to suspect other pathology as being predominant.

2. This monograph concludes a series of papers covering the subject of roentgenology essential to the practice of chiropody.

240 Tegler Bldg.

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CALCINOSIS

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CALCINOSIS in its various aspects and manifestations has been rarely written or reported on in chiropody-podiatry literature,[1] even less frequently than in general medical journals, although the disease may have important primary symptoms in the lower extremities. It is a comparatively rare disease with an insidious onset, and it is very possible that many of these are missed during our evaluation of other more acute symptoms and onsets. This paper will also point out the importance of laboratory and roentgenological examination.

Calcinosis is a general term designating rare diseases of calcium metabolism characterized by abnormal deposits of calcium carbonates and phosphates in the skin, subcutaneous tissue, and other parts of the body. The deposits have essentially the same composition as normal bone, being composed not only of calcium salts but small amounts of magnesium carbonate and phosphate, cholesterol and fatty acids.[2]

The two principal diseases of calcinosis are:

1) calcinosis circumscripta
2) calcinosis universalis

Intermediate forms occur which are designated as transitional. Calcinosis is also referred to in the literature by a variety of other names like "tendinitis calcerea," "calcinosis interstitialis," "petrificato cutis," "subcutaneous calcerous granulomata," and "calcinosis cutis." The last will be discussed in greater length in another paragraph of this paper.

Calcinosis circumscripta is confined almost exclusively to the regions of the terminal phalanges of the fingers and toes and to the extensor surfaces of the knees and elbows. When tophi are produced in the periarticular tissues, the disease is commonly known as "calcium gout" or "chalk gout." Localized calcinosis develops insidiously, usually pursues a mild course, occurs

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at all ages including old age. It is seen somewhat more frequently in women than in men. According to some authorities, scleroderma or sclerodactylia accompany calcinosis circumscripta in about 40% of the cases. Vasospastic attacks may occur, similar to those of Raynaud's disease. Ulcerations of the skin may develop with discharge of calcareous materials.

In calcinosis universalis large areas of the skin may be converted into calcerous plaques, or large inflammatory masses may develop over which the skin may ulcerate, with discharge of gritty, chalk-like material. Deposits may also occur in muscles, tendons, and nerve sheaths. Most cases occur in children and may be detected early in infancy. While gradual resorption may be observed in calcinosis circumscripta, it does not occur in calcinosis universalis.

The cause is unknown. It is not due to a deficiency in the excretion of calcium comparable to the etiology of gout, which is characterized by a deficiency in the excretion of uric acid. Hypercalcemia does not occur. It has been suggested that local tissue changes may favor the deposition of calcium. This is based on the frequency of calcinosis universalis in scleroderma, but the disease frequently occurs in individuals without scleroderma. According to Kolmer,[3] it is probably a disorder of hyperparathyroidism. Otherwise, it would have to be considered to be due to local tissue factors of an unknown nature.

The diagnosis of calcinosis is usually based on clinical manifestations supplemented by roentgenological examinations. Laboratory examinations are of value in differential diagnosis, and in calcinosis may be summarized as follows:

1. The total serum calcium is within normal limits—9 to 11 mg. per 100 cc. The same is true of serum phosphorus in terms of inorganic phosphate, normal average 5.0 mg. for children, 3.5 mg. per 100 cc. for adults. Serum alkaline phosphatase 4 to 14 Bodansky units in children, 1.5 to 4.0 units in adults, also normal.

2. Balance studies have indicated a marked tendency to the retention of absorbed calcium and phosphorus, especially calcium.

3. The blood uric acid, sodium, potassium, and magnesium are within normal limits.

Roentgenological examination reveals calcareous plaques of various sizes and shapes interspersed throughout the soft tissues.

Best and Taylor[4] state that calcinosis is a name given to conditions in which (a) calcified areas are scattered throughout the skin and subcutaneous tissue, designated as calcinosis circumscripta, or (b) a more generalized calcification of skin, interstitial tissues, tendons or muscles, designated as calcinosis universalis. When the calcification process involves predominantly the interstitial muscles, this condition is usually referred to as "Myositis Ossificans." In calcinosis, the calcium and phosphorus level of blood is normal. Metabolic tests have, in some instances, revealed a retention of calcium. In the region of the calcified areas true bone formation may occur. They also state that calcinosis of the superficial tissues is many times associated with scleroderma. Their further evaluation states that the cause is obscure, that the calcification process may be secondary to degenerative changes in the tissues themselves, and that there is no evidence that it is due to abnormal parathyroid function.

In myositis ossificans, muscles all over the body become rigid from calcification. The patient has generally been normal up to adult life, and then becomes subject to acute attacks of pain in various muscles, accompanied by local myositic swelling and some pyrexia. After the local inflammation subsides, calcium salts are deposited in the site that has been inflamed and the affected muscle becomes stiff and hard.

Weeks or months may elapse between successive attacks of this kind, but the number of calcified muscles slowly mounts up, until in extreme instances the patient is rigid almost from head to foot.

Calcinosis cutis occurs in three different types. They are classified as calcinosis cutis circumscripta, which is the localized type, and metabolic and metastatic types.[5]

Calcinosis cutis circumscripta. Deposition of calcium salts occurs in the skin in the form of nodules, plaques and tumors in sizes varying from a pinhead to a hazelnut. These occur chiefly on the upper extremities and particularly on the fingers or at the wrists, having a tendency to be situated over or along the course of the flexor tendons of the hands and the extensor tendons of the elbows and knees; or, in other words, in locations subject to frequent trauma and frequent motion. Early lesions are covered by skin that is normal in appearance but as the lesions enlarge, the overlying skin becomes adherent and inflamed and later breaks down. Creamy material containing small gritty particles of calcium slowly exudes. After a time this process ceases and the lesions may completely disappear, but are likely to recur, the cycle repeating itself. Patients with this disease often develop irregular areas of telangiectasis on the face and extremities, and rosacea.

In addition to local nutritional factors there are certain systemic conditions which favor the local deposition of calcium. Among these factors, Wilson called attention to the pH of the blood, the action of sunlight, the ingestion of vitamin D, and the possibility of parathyroid deficiency. In none of the cases are the blood calcium and phosphorus values especially abnormal. In his case the blood cholesterol was high. Maloney and Bloom showed by chemical examination that the calcium exists chiefly as phosphate. Local forms of calcification are also seen in tumors such as epitheliomas and sebaceous cysts, as described by Costello. He also describes a general or metastatic form in which increased amounts of calcium are found in the circulating blood, resulting from constitutional diseases such as osteomyelitis with widespread bone destruction, and in lymphatic leukemia.

Tobias[6] states that in children the disease sometimes disappears spontaneously, and in adults it is apt to be chronic. The diagnosis is usually not difficult and is based on the history, biopsy studies, chemical analysis of the deposits and roentgenograms. X-ray examination of the affected tissues reveals radiopaque deposits lying in the deep tissues. It is difficult to evaluate therapy, since many of the cases clear up spontaneously. Large calcium deposits are sometimes removed surgically.

I shall cite the case of Mr. R. M., age 37, who presented himself with the symptoms of painful feet and legs for a duration of two weeks at this particular episode. Further questioning elicited the information that he was discharged from the army in 1942 with a diagnosis of calcinosis in the feet. These episodes of pain, even at rest, have been sporadic since that time. He stated that after his discharge from the army, he began to get severe headaches, at which time he went to the Massachusetts General Hospital in Boston. After further evaluation there, he was referred to the Clinic of Metabolic Diseases. My roentgen ological examination revealed a scattering of calcific deposits throughout the soft tissues of both feet. With this finding I referred him back to the Metabolic Clinic, because his last visit was over a year. I subsequently received the following case history report from Drs. Albright and Henneman, who are in charge of the clinic:

> Mr. M. has been followed in the Out Patient Department of this hospital since 1942?. He reported that while in the army a diagnosis of calcinosis in the feet had been made and the patient given a medical discharge on this basis. Physical examination has always been essen-

tially negative except for the presence of numerous firm nodules beneath the skin of the left chest, the right inguinal region, near the right rectus, and on the posterial and medial aspects of the lower one-third of both thighs. X-ray examination has shown small areas of calcification about the feet and knees and elbows. X-ray of the skull demonstrated stippled calcification in the soft tissues overlying the parietal and occipital regions but without definite intracranial calcification. A skin biopsy was performed in 1942 and demonstrated bone rather than amorphous calcification.

Blood chemical values have been as follows: 1949—Serum Calcium, 11.2 mg.%; Phosphorus, 2.8 mg.%; Alk. Phosphatase, 3.0 B.U.%; Repeat, Serum Calcium, 10.7 mg.%; Phosphorus, 2.9 mg.%; Alk. Phosphatase, 3.5 B.U.%; 1952, Serum Calcium, 10.0 mg.%; Phosphorus, 2.5 mg.%; Alk. Phosphatase, 1.9 B.U.%; 1956 Serum Calcium 10.5 mg.%; Phosphorus, 2.6 mg.%; Alk. Phosphatase, 2.6 B.U.%.

Routine blood and urinalyses were entirely normal. 24-hour urine calcium excretion in 1952 was 45 and repeat 47 mg. per 24 hours.

In 1951 the patient returned complaining of headaches. An electroencephalogram at the Soldiers' Home in Chelsea in January, 1952, was interpreted as showing a definitely pathological focus in the left temporal area. This was repeated at the MGH in January, 1952, and showed an abnormal record with focus in the left temporal area. A lumbar puncture in 1952 showed normal pressure and dynamics. There were 7 lymphocytes per cubit mm. in the fluid. The spinal fluid protein was 93 mg.%. A repeat lumbar puncture showed spinal fluid protein of 60 mg.%. A repeat lumbar puncture in July, 1955, showed a spinal fluid protein of 66 mg.% and a repeat electroencephalogram in 1952 showed no change from the last previous examination.

It is of interest that x-rays of the patient's daughter show similar ossification in the subcutaneous tissues of the leg.

Thus Mr. M. would appear to be suffering from an obscure disease characterized by headaches, with elevated spinal fluid protein and abnormal electroencephalogram, and by subcutaneous ossification which is familial in nature. In view of the nonprogressive nature of his cranial complaints it was felt that no operative procedure was indicated. The blood calcium and phosphorus values on Mr. M. are highly suggestive of hyperparathyroidism although subcutaneous ossification does not occur with this disease.

We would like to continue to follow Mr. M. at 6 month intervals in one of Dr. Albright's clinics at this hospital.

Summary

It is of interest to note here that the clinic has found on x-ray examination similar ossification of the subcutaneous tissues of the leg in the daughter, which they say is familial in nature. I have done roentgenological examinations of the extremities of both his parents and his sister, and have found no evidence of any calcinosis in their extremities. Furthermore, I could find nothing in any of the medical literature pertaining to any familial or inherent factors in this particular type of calcinosis.

It behooves us to be constantly alert for the rarer diseases that we may encounter. It seems evident that research in this field has been very limited, although calcinosis cutis is now considered a dermatological problem because of its surface ulcerations.

There seems to be doubt in the minds of researchers that certain manifestations are due to metabolic disturbances, such as hyperparathyroidism, or to unaccountable changes in the tissues themselves.

176 Essex St.

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"Nothing so needs reforming as other people's habits."

Mark Twain

A CLINICAL EVALUATION OF DIPHEMANIL METHYLSULFATE IN THE TREATMENT OF HYPERHIDROSIS

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The problem of hyperhidrosis is encountered frequently in chiropodic practice. It is embarrassing and uncomfortable at best; at worst, it can lead to fairly serious sequelae such as maceration of the skin and exacerbation of dermatoses. Excessive sweating can also delay healing in many types of epidermal disease.

Various topical preparations are available for treatment. Thus far none has been entirely satisfactory. Hyperhidrosis has also been treated by oral administration of anticholinergic drugs. Banthine®[1] (methantheline bromide) has been most frequently used for this purpose, and recently Prantal®[2] (diphemanil methylsulfate) has also been tried. Reports indicate that Prantal has certain advantages in the treatment of hyperhidrosis.

Prantal is a quarternary ammonium compound with marked anticholinergic properties.[1] In medical practice it is administered orally in the treatment of peptic ulcers and various dermatoes as well as to control hyperhidrosis.

Nelson[2] compared the parasympathetic blocking effect of Prantal with that of Banthine. He found that Prantal was equal in effectiveness but attended by fewer side actions. Oral administration of Prantal controlled hyperhidrosis in 8 of his 15 patients. Prantal also exhibited definite antipruritic activity and was beneficial in cases of dermatitis.

Zupko and Prokop[3] administered daily oral doses of 400 to 800 mg. of Prantal to 50 patients with clinical or induced hyperhidrosis and compared the results with those following equipotent doses of Banthine. On the basis of sweat collection studies, Banthine was judged to be slightly more effective but Prantal had a longer duration of action. Although many undesirable side effects followed administration of Banthine, side effects with Prantal were few and mild. Prantal produced no alterations in the cardiac mechanism, hematopoietic system, or basal metabolism in any of the patients studied.

Prantal is also of value in cases of bromidrosis, which may occur alone or as a complication of hyperhidrosis. Gould[4] used Prantal for 6 patients with bromidrosis of the feet and obtained good results in all.

Prantal is available as a 2% cream for topical application in dermatoses and hyperhidrosis. Each gram of the cream contains 20 mg. of diphemanil methylsulfate. Parish[5] used it for skin diseases and hyperhidrosis, and obtained especially good results in the latter condition. There were very few side effects. Sacchi[6] used the cream in a large series of patients with various dermatoses, including 31 cases of hyperhidrosis of the feet. He reported that Prantal Cream was outstandingly successful in all but 2 of the hidrose patients and that there were no local or generalized side effects. These promising reports led to our investigation of Prantal Cream in chiropodic practice.

Method

Prantal was administered to 47 unselected patients exhibiting hyperhidrosis of the feet, with or without associated chiropodic problems. In some of these patients, sweat-

*The Prantal Cream used in this study was supplied by the Clinical Research Division of the Schering Corporation.

®1 Banthine, (Searle)
®2 Prantal, (Schering Corporation)

Table I: Results

Severity*	Number of Patients	Excellent No.	Excellent %	Good No.	Good %	Fair No.	Fair %	Poor %	Poor No.
Mild	11	5	45.4	3	27.3	3	27.3	0	—
Moderate	25	14	56.0	8	32.0	2	8.0	1	4.0
Severe	11	6	54.6	4	36.3	1	9.1	0	—
Summary	47	25	53.2	15	31.9	6	12.8	1	2.1

*Mild — skin damp;
Moderate — skin moist;
Severe — skin moist, with maceration, pitting, or eruptions.

ing was so excessive that maceration of the skin has occurred. All patients were told to rub the medication into the skin of the feet t.i.d. during the first week, b.i.d. during the second week, and once a day or less thereafter as needed.

Results

The results of this clinical trial are summarized in Table 1. Good or excellent results were obtained in 40 (85.1 per cent) of the patients. The cream worked equally well in the mild, moderate, and severe cases. We encountered no instances of sensitivity or other undesirable sequelae.

Patients who complained of itching feet, but without evidence of fungus infection, reported that Prantal afforded relief. In a few cases of epidermophytosis the addition of Prantal Cream to standard measures seemed to shorten treatment time. When an orthopedic problem was presented along with hyperhidrosis, correction of the structural defect seemed to enhance the effectiveness of the anhidrotic regimen.

One patient with hyperhidrosis had a basal metabolism rate of plus 34. She responded very well to the Prantal Cream and was referred to her physician for correction of the metabolic disorder.

The following case reports are typical of those in our series.

A female, 29 years old, perspired so profusely that her stockings were wet and odorous at the end of the working day. The feet became dry and free from odor after a week of therapy with Prantal, t.i.d. The condition is now fully controlled by applications of the cream each morning.

A male, 36 years old, complained of severe nocturnal pruritus in all the toes. Examination revealed no evidence of fungus infection. The skin had a "parboiled" appearance. The itching subsided completely when Prantal Cream was applied b.i.d., and the color and texture of the skin became normal in 2 weeks. The patient is being maintained on a single application each evening.

A male, 33 years old, presented an active fungus infection of both feet with scars from previous episodes. Hyperhidrosis was severe and there were open, ulcerated blebs. The feet were very edematous. Prantal Cream, t.i.d., was administered along with measures to control the primary complaint. The hyperhidrosis was completely controlled after 3 weeks of therapy. The patient is being continued on maintenance therapy with Prantal alone.

A male, 22 years old, presented a typical pronation syndrome accompanied by bromidrosis and hyperhidrosis. The skin of the halluces and of the plantar areas of the lesser toes and toe webbings was macerated. Prantal Cream was administered, b.i.d., for 4 days, after which time the maceration and dampness was markedly decreased and the odor had disappeared. Prantal Cream was continued during orthopedic treatment. The appearance of the skin was normal after 2 weeks of therapy and has remained so on maintenance dosage of Prantal.

Comment

Patients accepted Prantal readily since it is easy to apply, is free from odor, and does not stain the skin or clothing. Prantal is safe for home use since there is no

risk of accidental oral ingestion or overdosage.

We found that Prantal has a desirable lubricating effect on the skin. Some commonly used anhidrotic preparations tend to dry the skin excessively, so that fissures result and there is a loss of elasticity and normal texture. We did not encounter these disadvantages with Prantal.

(An incidental finding was that an application of Prantal Cream to the hands 30 to 45 minutes before the surgical scrub will lessen the accumulation of perspiration under the latex gloves.)

Summary and Conclusions

1. Prantal Cream was administered to 47 patients with hyperhidrosis; the condition was effectively controlled in 40 (85.1 per cent). 2. Prantal also has a desirable antipruritic effect. 3. There were no instances of sensitivity or other undesirable sequela following administration. 4. Because of its lubricating action, the excessive dryness that often accompanies use of other anhidrotic drugs did not occur with Prantal. 5. Patients accept Prantal because it is easy to use and safe, and does not stain skin or clothing. 6. Prantal can be used in conjunction with other measures when necessary.

1608 Milwaukee Ave.

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The main speaker at a chiropody convention at Atlantic City a few years ago while lecturing on office practice and public relations advised the profession to place literature concerning chiropody on the waiting room table. This literature was to explain the preparation, nature of work, and extent of the practice of chiropodists. Then she urged that this information be written by one who is not a chiropodist.

How many of us have practiced this policy? Have you a copy of CHIROPODY AS A CAREER in your office? As a public relations media among your patients, it will be worth a hundredfold the cost.

CLINICALLY SPEAKING

A place for the more informal presentation of reminders, suggestions, notes, observations and technics of value in office practice. Your contributions of short manuscripts or illustrative case histories will determine this section's usefulness.

ACRYLIC NAIL PLATE AND ONYCHOMYCOSIS

PETER MOGULL, Pod.D., F.A.P.
New York, N. Y.

In view of the approaching summer season, and taking particular consideration of the vanity of women and, of course, the treatment of onychomycosis of the nail, a clear and more detailed outline is presented herewith.

Since the publication in the Journal of the N.A.C., February, 1954, the author has treated many more cases and his added experiences and observations are submitted in this paper.

Such treatments could be applied to any parasitic or traumatic nails.

Treatment

In the following treatment, emphasis is placed on thorough and complete debridement of the affected portion of the nail.

This is accomplished by removal of the loosened nail portion. Follow it up with a 25% salicylic acid ointment or 40% salicylic plaster over the area involved, to protect the surrounding tissue.

Follow this up on succeeding visits until the entire area is free of debris and a normal, healthy, pinkish tissue appears.

For the final treatment a soothing ointment should be applied to the tissues for one week.

Care should be taken so that any healthy part of the nail being treated be preserved; this will serve as a base for the acrylic nail.

As the next step, make several serrations with an inverted dental burr, S.W. *No. 34*, with care taken not to puncture the healthy part of the nail.

Fig. 1. Left – preoperative affected nail. Center–preserved healthy portion of nail, serrated. Right – completed acrylic nail plate.

Mix your "self-curing" acrylic in a matching color to simulate the healthy nail; the mix should be a semi-"putty" consistency.

Apply two drops of liquid over the area of the toe.

Spread the acrylic with the wide end of a packer. Cover it with water moistened cellophane, forcing it lightly with the spatula yet making sure it adheres to the remaining portion of the nail and the entire nail bed, shaping it to the form of a normal nail by using the narrow edge of the packer, into the grooves with a slight pressure and gripping shape. Also force a very thin layer under the cuticle, thus sealing the entire toe with acrylic. Should the acrylic start to set or get hard too soon, add 2-3 drops of the liquid to it, and it will soften. Always moisten your packing instrument with water to avoid it sticking to the acrylic. When almost hardened, trim the length of the nail with scissors or burr.

Leaving the wet cellophane in place during this procedure will cause a high polish to be formed on the acrylic nail when the acrylic sets. Or it can be polished with a ¾" cloth disc that fits on a mandrel using Druta-Pearl Cream (Justi) obtainable from dental supply houses. Do not fashion the acrylic too thick as the pressure of the shoe may cause discomfort.

After a period of time, as the healthy

part of the nail grows, the new growth may crack the acrylic at the juncture. This is easily repaired by making a few serrations with a burr and a fresh deposit of acrylic added to restore the original shape. However, the prosthetic nail may remain in good shape for three to four months without becoming loose. This, of course, depends upon how much of a union or "hook up" had been established.

The author has observed a definite change occurring in the nail bed with the formation of new nail growth. Is this caused by the methyl methacrylate, or is it the sealing off of the nail bed from moisture and foreign bodies? I have no answer.

Idiosyncracy of patients to the acrylic is of a very low incidence. Sometimes the heat created while the acrylic sets may be annoying; this is easily reduced by use of a spray during the few minutes required for cooling. The entire procedure should take 20 minutes. The material used is self-curing acrylic. It sets at room temperature. This should not be confused with resilient plastic.

1619 Broadway

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SUBDERMAL KERATOLYTIC FISTULA—A CASE REPORT

SAM D. ZEBRACK, D.S.C.
Fort Polk, La.

A 26-YEAR-OLD Negro female came into the Orthopedic Clinic at the Army Hospital, Fort Polk, Louisiana. She was a referral to our clinic with a diagnosis of plantar verruca, located at the base of the metatarsals in the area of the 3rd and 4th metatarsal interspace. However, upon examination, it was noted that on debridement the verruca seemed to deviate laterally and anteriorly toward the phalanges. A nodular mass was palpated deviating anteriorly toward the head of the fourth metatarsal from the area of the original lesion described above.

The lesion at its last seeing, one week prior, had been treated with 60% salicylic acid ointment, and debridement of this previous application uncovered an open area approximately 1.75 cm. in diameter. At the same visit an epidermal excresence over the fourth head was reduced exposing a visible pin sized area, similar to a nucleus or pressure point, which could not be opened because of its minuteness, and which seemed connected by some subdermal channel to the original lesion.

Further questioning of the patient's history disclosed that the condition though previously diagnosed as a wart many times had been present for 13 years ever since the patient put a piece of wire through her foot accidently while running. The wire emerged in the vicinity of the minute opening beneath the fourth metatarsal head.

At the time of the accident in 1944 the patient was 13 years old and did not seek medical aid or advice. Her aunt removed the wire from her foot and blew smoke of some herb concoction through the wound from a "Canreel," which the patient describes as a small bamboo-like pipe. Nothing but a clean cloth was applied to the area. The patient's husband, a childhood sweetheart at the time of the injury, testifies that she had no mishaps in healing.

However, in 1949 trouble began when she noted that the area was becoming larger, "hen egg size" as she describes it. She sought medical aid in New Orleans and had the lesion lanced by a physician who found pus canalizing the entire area. The area evidently was drained and the patient

discharged. Since this episode she has sought medical aid approximately four or five times a month.

Because of the patient's extreme nervousness and apprehensions, and since a possible new diagnosis was uncovered as to the actuality of the condition, the area was dressed and the patient reappointed four or five times a month.

The patient returned to the clinic four weeks later and a solution of 2% procaine hydrochloride was used to anesthetise the area, 5¼ cc. being necessary to secure adequate anesthesia. A sterile field was prepared and a small curette was used in an attempt to investigate the suspected channel connecting the obvious lesion and the minute nucleus beneath the fourth metatarsal head.

An attempt was made to start the probing from the smaller of the two points and work downward toward the obvious lesion. However, this was impossible without plantar resection of the skin. Thus the original lesion was used as a probing site. A dried greyish solid-like exudate was carefully removed from the original lesion with no blood present on the curette, and the entire length of the curette was inserted into the wound which was about 5.33 cm. in length. The forepoint of the curette could be felt in the minute area deep to the fourth metatarsal head. However, penetration of the channel to this area was impossible without overt trauma to the area. No blood could be observed on the curette after removing it from the area which may be best described as a keratolytic channel or what at one time was a self-inflicted fistula.

It was impossible to place any type of drain in a blind channel of this length, thus the area was dressed with bacitracin ointment and a protective padding applied. The patient was then sent to the X-ray department for films.

The X-ray report was negative, with the observation that soft tissue study was impossible in this area.

Our diagnosis of the condition was a subdermal keratolytic fistula. Surgical intervention in this case was deemed the best possible solution, except that it is all but contraindicated here. The location of the lesion makes it almost impossible to reach the area unless a plantar incision is used, and in this case the patient's tendency toward scar formation is a direct hindrance. The mode of therapy chosen was accommodative padding, with an appliance to be constructed at a later date. The patient is asymptomatic with proper padding of the area.

The case is to be reviewed by an Orthopedic Consultant at a later date.

U. S. Army Hospital

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"During your lifetime you will walk an average of 70,000 miles—nearly equal to three times around the world," Herman Bundesen, M.D., reports in one of his daily columns, "Advice on your Health." The medical columnist states that poorly fitting shoes and stockings are one of the primary reasons for foot trouble, and that diabetes also accounts for aching feet in some individuals.

SINUS IN RECALCITRANT CONDITIONS

MICHAEL V. SIMKO, D.S.C.
Bridgeport, Conn.

An incomplete history and examination is likely to result in an interdigital soreness being diagnosed as a soft corn, whereas, actually a painful sinus accounts for the discomfort. Since a sinus frequently occurs between the toes and persists beneath a soft corn this improper opinion, while not excusable, is understandable.

The common symptoms are extreme tenderness. swelling and redness. The pain is more pronounced in a sinus condition than in a soft corn. After excising the typical offending macerated mass in the conventional manner, a pin-sized puncture is usually exposed, sometimes yielding a slight exudate upon pressure.

A sinus is a tract or canal leading from the skin into the cavity of an imperfectly healed abscess, or it may be the unhealed portion of a wound. Stern and Adams in Surgery report: "A sinus is a tortuous track opening usually upon a free surface and leading down into the cavity of an imperfectly healed abscess. A sinus may be an unhealed portion of a wound. Many sinuses may be due to pus, burrowing subcutaneously. A sinus fails to heal because of the presence of some irritant fluid or, because of the existence of some foreign body, as dead bone, a bit of wood, a bullet, a septic ligature, or because of rigidity of the sinus wall which rigidity will not permit collapse. . . . Sinuses may be maintained by want of rest (muscular movements) and by general ill health."

This sinus is most commonly found in the web between the fifth and fourth toes. It is also found on the phalangeal joint either dorsally or laterally of the 2nd or 4th toes, usually under a heloma durum or heloma molle. Obviously, irritation of a shoe and increased pressure from the excrescence, with a lowered resistance in the subdermis, accounts for the painful channel. In the writer's experience, sinus conditions seem limited to patients advanced in years. The most recent patient in our office with an interdigital sinus was 75 years old.

Application of soothing agents will not assure complete relief from the condition. Digital pressure should be applied first to relieve the tract of any pus or serous fluid. Until granulation at the base of the sinus is stimulated the condition will continue recalcitrant, and granulation will not occur while septic conditions prevail in the sinus or at its base.

A complete swabbing with an antiseptic solution or applying a gauze pack saturated in "physician's" alcohol for a brief period promises a cooling relief and assures asepsis. A very thin swab dipped into 7% Tr. Iodine is then probed into the canal which is subsequently packed lightly with cotton to prevent premature surface closure.

After 3 or 4 days the condition requires re-dressing. If the interval between visits is lengthened, the packing often becomes detached whereupon the wound proceeds to close on the surface while the tract remains incompletely healed. Soreness will persist and the channel will require puncturing anew.

Upon the second or third visit when inflammation and tenderness has subsided and the probe penetrates only slightly, an application of Desitin®[1], unguent promises relief and speedy restoration to normal. It is obvious that relief from pressure is specially essential to the treatment. The shoe should be cut and suitable padding affixed to the ailing toe. A thin, semi-lunar felt pad retained in position with a winding of lamb's wool assures comfort.

®[1] Desitin (Desitin)

When the amount of pus is alarming and inflammation advanced an (alcohol and boric acid) wet dressing for 24 hours is recommended. Since on one occasion (alcohol, boric acid and carbolic acid) solution produced adverse results in the treatment of a suppurating corn, the writer steadfastly avoids the phenol ingredient. The iodine swabbing follows the wet treatments. 10% or 25% silver nitrate application is advised by some, but the writer has not been happy with results on interdigital sinus conditions and prefers the 7% tincture. For interdigital sinus cases 10% silver nitrate is preferred to the 25%.

On the other hand, an obstinate condition recently responded admirably to 25% silver nitrate. On her first visit, Mrs. S., age 60, presented a painful contused area at the base of the 2nd metatarsal head. The callous patch was first treated in the regular fashion, the contused area was punctured and suitably swabbed with Bactine ®[2]. A sizeable perforation was exposed, and a careful probing revealed a plantar sinus of surprising depth.

This patient responded to 25% silver nitrate and, in the last stages, Desitin®[1], unguent; but after less than two months' relief the condition recurred. The same routine was again effective, but because the patient neglected to comply with our recommendation for suitable appliances to relieve metatarsal irritation from chronically enlarged and malaligned metatarsal heads, the sinus reappeared beneath a month's callous accumulation. After a third recurrence we became more insistent about the required prosthetics, whereupon the patient acceded.

Today the patient visits our office every six weeks for routine care. The callosities are completely eliminated and the contused area with its previously persistent sinus is a thing of the past. The appliances, with extensions to relieve pressure on the 2nd metatarsal head and the contused area, have effected marked relief to a condition that had plagued the patient for months.

Summary: 1. Relief of pressure is an absolute pre-requisite for obtaining satisfactory correction of the sinus condition and 2. granulation from the base of the sinus outward to the surface must occur before we can expect restoration to normal.

955 Main Street

® Bactine (Miles Laboratory)

CHICKEN POX — A Case Report

STANLEY M. ROSEN, D.S.C.
Teaneck, N. J.

M. R., a six and a half year old female, presented herself at the office accompanied by her mother. The mother stated, "The child has an infection on the bottom of her left foot, and last night the child had a very poor night's sleep due to this infection."

Examination revealed a cellulitis under the first metatarsal head on the left foot. The tissues were opened and purulent exudate removed, leaving a clean base. The area was dressed with an aperture pad and antibiotic ointment.

Further examination found seven other vesicles, on the forefoot only, of both feet. This cursory examination led to a diagnosis of dermatophytosis, with secondary bacterial invasion.

Looking at the child's face, I noticed four or five crust formations. The patient was then undressed revealing more crusts on the body.

Through questioning of the parent it was found that the child recently was exposed to Chicken Pox in school.

The diagnosis was then changed to chicken pox with secondary bacterial invasion of the vesicle.

The patient's pediatrician was called and an immediate appointment made. The pediatrician confirmed the diagnosis.

806 Palisade Avenue

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Address all communications intended for publication, matter relating to advertising, business or subscriptions to the above address.

REPORT OF THE PRESIDENT

FELTON O. GAMBLE, D.S.C.
Tucson, Arizona

The time that one may give in the short term of a year's administration seems all too limited. Every available hour has been yours, trying to achieve as much coordination of our efforts as possible. The cooperation that has been received has been rewarding for it has been the key to our progressive posture this year. An informed membership through communication has been sought by my Messages in the Journal, Newsletters to State Officers, and Memoranda to Committee Chairmen and Executive Council Members. The extensive Headquarters Newsletter was sent to every member of the profession to increase the awareness that the N. A. C. is very much alive and vitally attempting to advance our profession on a broad front through aggressive action.

The pursuit of the twelve item agenda that was announced as our plan of action for 1956-1957 has materially added to the stature of the profession. Every component of our organization; Executive Officers, Officers of the Association, Executive Councilmen, Consultants, Office Staff, Committees, and individual members of the N. A. C. have contributed to the success of the year and I express my sincere thanks to all for their fine cooperation and dedicated efforts. As this report is given, some of the problems as well as the rewards that have accrued will become apparent. Let us examine a brief account of our progress record.

1. Activation of the Regional Plan. Every state in the National Association has an opportunity to present its programs and its problems to an Executive Council member and an Executive Staff Officer at the regional representatives meetings held at every Regional Convention. Likewise, the N. A. C. program was presented on a factual basis so that each state could see its benefit to the membership. Reaction to this method of communication was excellent.

Concrete benefits: Many Regions, previously unaware, have come to know the advantages of having their state officers meet together so that mutual problems may be discussed. N. A. C. representation provided guidance for many problems. Region 11 is reorganizing the management of the S. W. C. C. and sought advice concerning systems used in Region 5 and Region 3.

JONAS C. MORRIS, D.S.C.
Audubon, N. J.
Assumes Office of President
National Association of Chiropodists

Region 12 relinquished by mutual consent the states of Idaho and Wyoming to Region 7 in order to strengthen the Northwestern Conference. The Region 7 meeting was held in Portland, Oregon, and the Executive Officers met with non-members in an effort to iron out some of the problems. Items in the Headquarters Newsletter were explained and discussed. Speakers on Scientific Programs at all meetings were compiled for publication.

The full complement of 12 regional meetings were held within 5 calendar months: October, Regions 1, 8, 10; March, Regions 2, 5; April, Regions 3, 6; May, Regions 4, 7, 12; June 9, 11. Our N. A. C. Convention held in August is separated by several months from any regional convention. This and other data concerning conventions will be charted for consideration by the regions for their mutual benefit.

Problems: Region 3 objected to scheduling an N. A. C. Convention in Philadelphia in 1959. Region 2 and 3 are reluctant to disclose attendance figures for our regional convention survey. Region 4 did not conduct a formal audience for the Executive Council representatives.

2. Improvement of the caliber of the N. A. C. Journal. The new JOURNAL SPEAKS FOR ITSELF. A profession is judged in a degree by its literature and we can be proud of our official publication.

Editor Rubin and Business Manager Fielding did an almost inconceivable job in producing the new format in time for the January issue when instructed by the Executive Council in November.

Increased costs of production will account for a drop in Journal net income this year, however, the improved Journal provides a better medium for advertisers so that Journal income will swing upward. Increased rates for advertising have been adjusted in keeping with 1957 rate and data schedules. Our previous rates were obsolete and something radical had to be done to bring them up to par. Watch the Journal advertising grow and with it greater interest in chiropody by more concerns. A tremendous campaign for advertisers is underway by Administrator Fielding.

3. The production of an N. A. C. Directory. The membership is entitled to a listing in a reference directory. In spite of the terrific burden in producing the new Journal, our staff officers have delivered a splendid new format directory. Sufficient advertising copy was solicited by Administrator Fielding to defray a big percentage of the cost of the directory production. In view of simultaneous sales campaigns for Journal, Directory, and Convention advertising, this year's effort is commendable.

4. Improvement in our National Convention. The multiple section scientific program has been reintroduced so that more diversified features may be presented. The only complaint may be that there was more scheduled than could be attended by one person! The discussion of all formal papers places our scientific effort on an acceptable, objective plane. Workshops, panels, science theater, scientific exhibits, and a host of other features detailed by the Executive Council Subcommittee on Convention should make the 1957 Annual Meeting highly successful. Our commercial exhibit section is being expertly handled by a professional convention management service whose accounts include many medical associations. This year our convention will be rated by the American Medical Exhibitors Association and if we make the grade, we should be able to attract new medical exhibitors.

5. A program to place (trained) chiropodists in Industrial Chiropody positions. This program has been carefully evaluated by Dr. Holt, Chairman of our Industrial Relations Committee, and emphasis has been placed on developing adequate training programs rather than placement at this time. A post-

graduate course has been completely set up with one of our colleges to be held in the fall. Public relations have automatically accrued through Dr. Holt's attendance at the Annual Industrial Medicine Conference as Chiropody's representative interested in foot problems.

6. A vigorous campaign to gain authority for chiropody under all insurance policies related to disabilities within our scope. Your president advocated in a Journal message a state by state survey of the companies recognizing chiropody claims and those not recognizing our claims. Results have been poor regarding the receipt of reports from the states concerning these lists.

The Executive Council sponsored a Conference on Insurance Problems at our November meeting. Attorneys Borkin and Williams explained the process used in achieving recognition in D. C. Representatives were invited from state societies. N. Y., Va., N. J., Penna. and Cal., were among the guest states represented in addition to council members. The Executive Council Subcommittee on Insurance extended a memorandum to each state society with advice concerning our approach to Blue Shield. Negotiation on a National level is being pursued. Negotiation on a state level has been successful in several states this year. Enabling acts have been amended in several states. Progress is being made and with the improved experience patterns we can look for increased acceptance in every quarter.

Group contracts sponsored by unions have included chiropody through the efforts of our National Association Administrator Fielding and Dr. Conforti of Ohio the Director of the Council on External Affairs.

7. Support of our Educational Institutions. A major portion of our committee budget has been expended in the interest of gaining students, our life blood, for our colleges. The Vocational Guidance Committee has provided literature and kits for student enlistment and our Audio-Visual Committee has developed its first new exhibit entitled, "This is Your Life" for the same purpose. Much of our Staff Officers' time has been devoted to the promotion of our educational system. Our vocational exhibit was shown and serviced by the Michigan Society at the American Personnel and Guidance Association convention in Detroit with great success.

The Executive Council sponsored a full day conference on Chiropodical Education Problems that was attended by Deans of the Colleges, representatives of the Council on Education, and guests from Government and private education. This has brought into sharp focus the aims, aspirations, and problems of our colleges. Our entire future development depends on our institutions assuming the responsibility of improving the status of every facet of their operation. The N. A. C. stands ready to help.

8. Improvement of our Commercial Relations. Every effort is being made to make ever member realize that the concerns that advertise with us in the Journal, Directory, and Conventions deserve our interest and patronage. The mere request for information about a product is important to commercial houses. The Headquarters Newsletter and Regional conferences have driven this message home. A concerted effort is being made to attract at least 1000 registrants to our National Convention to show our good faith with our loyal exhibitors.

The Pharmaceutical Committee through its column in the Journal and through Chiropodical State Formularies is making splendid relations for us with drug houses. Economic surveys are being evaluated to show what areas of practice use certain products. Administrator Fielding is carrying on an educational campaign as well as a sales campaign concerning the things we treat and the things we use. Too many drug

houses are totally ignorant of our legal scope.

If we can maintain decorum in the face of some recognized infractions at the present time, I believe that a new era of cooperation will be opened up with the shoe industry. Several glaring faults need correction but patience and facts should clear the issues.

9. Improvement of Practice Standards. In a phase of the membership campaign a mailing piece, "Check List for Practice Improvement" was offered to every State Society for distribution to non-members. The State of Connecticut recently sponsored a panel discussion on "Chiropody Failings" which was good for all concerned, and should be extended to other states. Intensive effort was made to set up post-graduate training for states weak in this field by Chairman Walsh of the N. A. C. Surgery Committee.

10. A comprehensive Program of Medical Relations. In an effort to firm our medical relations on a broad front to gain better acceptance, especially in hospital affiliation, your president promoted the idea of Inter-professional Conferences at 4 key geographically distributed regions. Panels were conducted in which physicians and chiropodists participated to discuss their areas of responsibility to diabetic patients, patients in industry, and insurance problems. Region 11, in Houston, Texas, under the direction of Dr. Valenza had an outstanding program and received the president's award. It is hoped that this program will be continued. At Region 3 in Atlantic City, the new President of the A. M. A. Dr. Allman was a speaker on the "Fallacies of Socialized Medicine." Dr. Allman acted on behalf of the Mayor of Atlantic City in greeting your president. An attempt is being made to have an A. M. A. Liaison Conference at the Executive Council Meeting in connection with our Annual Meeting.

11. Complete coverage of the Federal Affairs prospectus. For many years we have not had the personnel to cover federal legislative problems. This year we have had the good fortune to have Joseph A. Lawrence, M.D. act in a consultant capacity to advise concerning legislation affecting our profession. For many years Dr. Lawrence has been employed by the A. M. A. in this capacity in Washington and he continues to represent the A. M. A. on an inactive basis. Together with Dr. Turchin our Federal Affairs Chairman, a most complete and alert attitude has been assumed toward federal affairs. Teams have been organized with prepared briefs ready to appear at committee hearings regarding the inclusion of chiropody in federal legislation, especially in connection with construction, training, and research grants for our colleges. Contact has been made with the American Thrift Assembly in support of the Jenkins-Keogh bill. Our Administrator Fielding has explored and promoted our cause with numerous government agencies.

12. Intensified effort in public information and public relations. The American Foot Health Foundation is the public information arm of the profession. This year the A. F. H. F. has revitalized its organization and has promoted some splendid events of great value to the profession. Foot Health Week was again sponsored by the A. F. H. F. although executed by the N. A. C. State components and from reports I have received from Wisconsin, Pennsylvania, and other areas this should be a banner year. Our Public Information and Relation Committees of the N. A. C. have a concentrated program set for the Annual Meeting which should give us good press. Dr. Shapiro, V-P and Chairman of our Audio-Visual Committee has developed a new series of exhibits which are excellent and promote our profession where it is most needed: Childrens Foot Health; Medical-Hospital Relations; Vocational Guidance.

The extension of chiropody influence this year through our contacts with government, congress, labor, industry, education, medicine, insurance and other areas at top

level represents the most important type of public relations for our profession.

Some of the items that I have covered in this account related to our agenda will be elaborated upon in the reports of our Staff Officers, Elected Officers, Committee Chairmen, American Foot Health Foundation, Council on Education, and possibly others.

Administration

An entirely new administrative scheme was endorsed by the 1955 House of Delegates and my predecessor had the task of starting its operation including the employment of an additional staff officer. Effort has been directed this year toward integrating the new system and utilizing the components for the ultimate benefit of every member of the Association.

Three major changes in the structure of our organization have altered attitudes so that it is easier for us to forge ahead with an aggressive program of advancement.

1. The creation of an Executive Council has provided a constitutionally delegated authority to cope with the problems of the profession throughout the year on a continuing basis. Matters of Policy, Planning, Budget and Fiscal, Legal, Federal Affairs, Journal, Insurance, Convention, Regional Plan, Grievances, Building, and Administration have been assigned to subcommittees. The Executive Council has fostered through this system many of our progressive measures.

I feel that the more representative thinking of an 11 member Council is an improvement over the old 5 member Executive Committee because of greater responsibility vested in the Council. In the past, our Executive Secretary, through years of experience, required less help from the Executive Committee. Today, our Staff Officers find a measure of direction from the policies established by the Executive Council, however, there is no interference with the Staff Officers' execution of their prescribed duties.

2. The new Administrative Division of our committee structure into Councils strengthens our system by designating special areas for development. By concentrating our committees into categories of like interests, effective coordination may be achieved through their supervision by the Council Director. I have utilized members of the Executive Council as Directors of the Administrative Councils. It has meant a very heavy work load for these 11 men and they deserve the gratitude of all for their long hours and days of service. It is an undeniable fact that our committees perform a great amount of work that relieves our headquarters staff, in fact, it would be impossible for time to be committed from headquarters to perform such work.

3. Enlargement of our Executive Staff to consist of a Secretary and Editor, and Administrator was an absolute necessity. One man could no longer handle both jobs. It is inconceivable that any national organization can cope with the multitude of factors that enter into its stabilization and development without competent and adequate headquarters staff. We now have two executive officers. We can expect only 40 committed hours of work apiece per week plus the dedicated hours that they give so unselfishly. The sooner we augment this meager staff by administrative assistants, the more rapid will be our progress.

Finance

The 1956 House of Delegates approved a budget in which deficit was anticipated over our normal income. The estimate at that time was far short of the total deficit that was incurred. Last year's convention was substantially in the red, so was the amount of money estimated for the interim financing period from June 1 until our budget went into effect. The salary of our Administrator, expenses attendant to Executive Council meetings, and the enlarged Council on Education are new costs that have not been compensated by increased revenue. Our Journal income accounts were at a

very low ebb this past year and we have made a concerted effort to improve this situation. Production of our new Journal upgrades this potential. Our treasurer's report will detail the problems, but it is very evident that we should stabilize our operation with an increase in the annual dues assessment of every member so that our present advancement program may be continued.

Our membership is receiving more for their dues today of tangible value than has been possible for many years due to our building program and development of a cash reserve. We must take a courageous viewpoint and make realistic plans for our future. A sustained public relations program should be on our planning table. Our National Headquarters should assume many areas of responsibility now shouldered by state societies. Our sphere of influence will be enlarged in direct proportion to our national acceptance as a profession, not by the acceptance of four or five segregated states. I should like to see an annual increase in N. A. C. dues for the next five years so that in combination with increased membership the N. A. C. could underwrite a budget of $250,000 annually.

I do not approve of deficit financing and unless the 1957 House of Delegates sees fit to approve a nominal dues increase, we must curtail our program.

N. A. C. Extension

During the past year your president made official visits to the Conventions in Regions 12, 11, and 5. He was an invited guest speaker at Region 3.

Fewer visitations than normal were made in view of the assignment of members of the Executive Council to the various Regional Meetings and the heavy schedule of visitations made by our Staff Officers. Economy is achieved by having Executive Council members report the work of the N. A. C. to their region so no expenses are incurred. The same is true when an officer is invited as a guest speaker when expenses are normally paid.

Your president has made it a personal responsibility to visit the six Colleges and address each Senior Class with a message of invitation to participate in the N. A. C. on graduation. The topic, "Opportunity Unlimited." This project is of great importance for the extension of our organization since the student is the practitioner of tomorrow.

While in New York, I visited the late Dr. M. J. Lewi and personally extended official N. A. C. greetings and best wishes for his 99th year.

Your president was deeply honored to give the Ruben Friedman Memorial Lecture for the combined Philadelphia Chiropody Societies.

In view of great distances involved in travel and conflicting dates several invitations to address conventions were reluctantly returned.

Recommendations

Although it is customary for the retiring president to make an extensive list of recommendations, I have included a number of suggestions in the body of this report, and I shall limit additional items to a general premise.

We have just completed the Stickel 10 Year Plan. We should adopt a broad 5 Year Plan composed mainly of the objectives stated in our Statements of Policy.

Each year we should follow a plan of action agenda rather than a piecemeal approach in our administration.

A limited list of projects should be selected for definite and conclusive accomplishment each year.

Greater assistance should be rendered to state societies through our N. A. C. Projects and Staff experts.

Conclusion

Our future is bright, we need only the courage, vision, and stamina to arrive. It has been a privilege to serve my profession this past year and I relinquish the chair to a very able successor with the confidence that he will "Aim high and follow his aim."

1888 N. Country Club Road

Congress Considers

CONGRESS may not reach for consideration this session (H. R. 6874), the Bill that would grant authority to extend financial aid to certain types of medical schools. Two factors are operating in opposition: the efforts Congress is making to reduce the budget have had their influence on Bills of that character, and the filibuster on the Civil Rights Bill will arrest all legislation until the differences of opinion can be resolved.

Polio

The Public Health Service announced that poliomyelitis vaccine inventories in the hands of manufacturers, druggists, physicians and health officers total about 10.3 million cubic centimeters for the week of June 28, the highest inventory level sincee weekly reports were started last April. Data on the distribution and use of the vaccine are collected each week and transmitted to the American Medical Association, the National Foundation for Infantile Paralysis and the Association of Territorial Health Officers.

Blindness

A proposed Bill to provide for an intensive study and report on problems relating to blindness and the needs of blind persons has been sent to Congress by the Department of Health, Education and Welfare. It calls for appointment of a 21 member temporary Presidential Study Commission on Problems of the Blind.

The Commission will submit an interim report by July 31, 1959 and a final report with recommendations for action a year later. The study would cover such areas as prevention of blindness and restoration of sight, utilization of limited sight, employment opportunities for the blind and contributions to advancement of the blind being made by public and voluntary agencies. It was pointed out that there are upwards of 320,000 persons in the United States who are blind and the number is increasing. At least three (3) members of the Commission will be blind persons.

Health Needs Study

Public Health Service announces that an extensive study of health needs in sparsely settled rural areas started in July. The study is designed to help develop more effective and economical methods of bringing modern public health services to people in the less populous areas of the country. The Committee began with a survey of health situations in Kit Carson County in Colorado, and will be extended later to other countries in the Great Plains area, where there are few local health departments and the farm population is widely scattered.

This study will involve interviews with more than 1,500 families. Data from this and later surveys will provide the basis for an appraisal of the rural health needs and development of practical ways for meeting them.

Federal Advisory Council of Health

Senator Smith of New Jersey (by request) introduced a Bill (S.2293) authorizing the creation of a Federal Advisory Council of Health in the Executive Office of the President in accordance with the recommendations of the Commission on Organization of the Executive Branch of the Government, to evaluate and advise on reorganizing the conduct of the several medical programs in respects necessary to achieve a maximum of economy and to eliminate duplications of efforts and competition among the several departments and agencies. The personnel of the Commission would include members of the medical profession and persons with distinguished fields other than medicine.

Among other things, the Commission will advise on measures to assure adequate health manpower and hospital facilities for the nation's health, review the various proposals and programs relating to hospital construction involving federal funds including federal grants. It will also advise with respect to the coordination of the regional hospital services of all departments and agencies in the Executive Branch of the Government; advise upon measures for the adequate training and selection of the medical staffs of all federal services; advise concerning systems of project grants for health research programs for the Federal Government; advise the Administrator of the Veterans Administration with respect to recommendations for closing certain hospitals belonging to such Administration; review the manner in which the hospital facilities of the Veterans Administration are being used and make recommendations for the disposal or more economic utilization of such facilities; make recommendations to improve preventive medicine and health services including those rendered in connection with medical care of federal beneficiaries and review and make recommendations to the President with respect to the health research programs. The Council is authorized to make such rules and regulations as may be necessary to carry out its functions under this act.

Epidemic Control

Surgeon General Burney has conducted several conferences with various individuals and organizations where plans were discussed for medical manpower needs in the event of an epidemic in the United States.

Medicare

Contracts under the Medicare Plan expired June 30 and Lieutenant Colonel Richards and Major General Robinson reported that all were renewed without modification.

Institute in Social Gerontology

The University of Michigan has recently received a grant of $203,940 from the National Institutes of Health, Public Health Service, to set up a Training Institute in Social Gerontology. Seventeen universities are cooperating in the project; they are California, Chicago, Connecticut, Cornell, Duke, Florida, Harvard, Illinois, Iowa, Michigan, Minnesota, Pennsylvania State, Pittsburgh, Purdue, Syracuse, Washington (St. Louis) and Wisconsin.

As the first activity, publications will summarize all that is currently known about personal and social problems of human aging. The second phase involves a one month training seminar for about 40 faculty members selected by the Inter-University Council from applications submitted through universities and colleges.

Antivivisection

Senator Langer on July 8 introduced S. 2481, a bill to prohibit experiments upon living dogs in the District of Columbia and providing a penalty for violation thereof.

So far no substitute has been found for integrity.

Wm. M. Thomas

WOMEN'S AUXILIARY

The Chiropodist's Wife—Her Investment In the Future of Chiropody

THE NATIONAL AUXILIARY is an affiliated society of the National Association of Chiropodists, devoted to the encouragement and promotion of chiropody among our members, non-members, and the general public; to inculcate and foster the spirit of friendship and the common bond between the members of the profession, their wives and families. We are a service organization dedicated to assist in the many phases of the profession and to instill in our membership that sense of loyalty; to foster such activities as will tend to perpetuate the objects and ideals of the National Auxiliary. These are the reasons why the objectives of the National Auxiliary, its membership qualifications and essential programs differentiate from those of other organizations.

To fulfill the major objectives, farsighted leadership through its officers and chairman is essential to meet its responsibilities. Knowledge of the nature and scope of our varied activities is of vital importance to appreciate and understand these objectives.

The National Auxiliary as the parent body aims to be a center of information providing the members with current useful information through bulletins, the Journal of the N.A.C., and other means. Convening annually at the National Convention, problems of current interest are discussed at the executive board and general meetings. Through this mutual association, each member receives from the others the respect and confidence to which she is entitled, steadfastly developing year after year.

What, in turn, are the responsibilities of the state and local auxiliaries to the parent body? This depends, naturally, upon the cooperation and information provided. The groups are eager to make good records and meet their responsibilities with credit. Thus, united in purpose, we are furthering the profession on a national level.

Naturally, one must give, as well as get, in perpetuating our purposes; and cooperation with other groups through the membership by means of sound public relations, scientific societies, educational institutions, interprofessional relations, and other service organizations, will result in important mutual benefits.

Take time to remember that chiropody is your husband's career. Help him to become more successful by showing keen interest and offering help and encouragement. Make it your business to keep up with the progress in the profession. Read more about it and don't hesitate to ask questions and discuss it at your meetings. If you are your husband's office assistant, you are indeed lucky. Be a good listener and sit in on an association meeting now and then. You'll find it stimulating and educational.

We are constantly striving to develop and maintain programs that will attract wide membership interest and support. Success in this vein has been achieved through our public relations program by the cooperative efforts of the auxiliaries and the association members. You will be interested in knowing that the booklet is in its 4th printing and is at the 100,000 distribution level. Another important phase attracting national attention is our Vocational Guidance program. Many auxiliaries have mailed copies of the pamphlet "Chiropody As A Career" to all public and school libraries. Vocational Directors have received these pamphlets and dates of Career Days have been requested in an effort to include the profession of Chiropody to graduating students in the school program. As an aid to the Audio-Visual program, the film "Chiropody As A Career" is being shown before various institutions and organizations, followed by a commentary by a chiropodist well versed on the subject. Industrial Foot

Health has made great strides in the past few years. Our woman power is cognizant that help in this direction is needed. Industrial foot health examinations of union members and school foot health examinations are conducted by chiropodists in numerous areas. Aid in filling out the forms and other secretarial duties can be maintained by our women. Our daily contacts with members of the allied professions, the physician, nurse, pediatrician, dentist, opthalmologist and pharmacist, forms an excellent basis for bettering interprofessional relations. On a legislative level we endeavor to support the issues confronting the profession.

Every member of an auxiliary rightfully expects to receive from his membership important benefits to compensate for dues payment. It is therefore vital that a definite program of activities be formulated and carried through. Consequently, the program of every auxiliary should be so coordinated as to give the maximum of service to its members while expecting the minimum of effort from them. As a chiropodist's wife, your investment in the future of the profession will yield many dividends. As a member the local, state and national auxiliary will provide you with the following benefits:

1. Better acquaintance with the membership as a whole, thus engendering trust and respect.
2. A progressive public relations program which educates the public to a better understanding and acceptance of the chiropodist and his profession.
3. A functioning organization prepared to meet any obligations that may arise unexpectedly.
4. Information on a variety of subjects, including:
   a. Membership and organization.
   b. Affiliated societies, programming.
   c. Latest developments in the profession of particular interest to the membership.
   d. Holding office in the auxiliary.
   e. Being recognized, as a result of auxiliary activities, as a leader.
   f. The working out of internal auxiliary problems and recognizing that one never really knows anything until he does it.
   g. Increased prestige and the good will that is bound to follow.

What are the reasons for joining an auxiliary?

1. You believe in the auxiliary and its objectives.
2. You use the services of the organization.
3. You like to attend meetings.
4. You appreciate contacts and companionship.
5. You want to join because your friends belong.
6. You seek personal preference and recognition.
7. You want to keep informed on auxiliary matters on all levels.
8. You want to improve it from a social and business standpoint.
9. You want to work with competitors on mutual problems.
10. You like the social and recreational features.

Why chiropody wives decline to join an auxiliary:

1. They do not believe organized effort can accomplish anything.
2. They do not want to spend money for dues.
3. They think they can get the benefits anyway (these are referred to as free riders).
4. They like to be individual "big shots."
5. They haven't got the money.
6. They have had some unfortunate past experience.
7. They are non-mixers; and do not like to meet people.

8. They have an exaggerated opinion of their own cleverness.
9. They think they have all they can get out of the organization (these are "in-and-outers").
10. They can't dominate association policies.

In considering membership, which is in itself a cooperative venture, it is good to consider the things that people will do:

1. Follow a habit till it hurts.
2. Accept beliefs ready-made, and stick to them tenaciously.
3. Follow leaders blindly, and will believe their friends even though they know they are wrong.
4. Yield to suggestion when flattered.
5. Work hard to establish superiority in the eyes of other people.
6. Find the greatest interest in their own emotional "kicks."
7. Glorify the past and discount the future.

The following are things people will not do:

1. Will not look beyond their own interests.
2. Resent change and dislike newness.
3. Forget the past and remember inaccurately.
4. Will not fight for things when they can find something to fight against.
5. Do not dare to be different from the crowd unless those differences are recognized as being virtues.
5. Will not exert themselves beyond the line of least resistance except under high emotion.
7. Will not act even in important matters unless they are followed up.

Once you are a member, here are some factors to be considered in keeping members interested as well as attendance at meetings:

1. Good meetings require sound programming to include subjects of concern to each person, such as a lecturer, movie, slides, book review.
2. Good meetings held as frequently as may be necessary will assure a more adequate attendance.
3. Bulletins or newsletters are important. To be of value, they must be read. Therefore, they must be timely, interesting and well written.
4. Publicity is likewise important. Most people, whether they admit it or not, like to see their names in the paper. See that adequate publicity is given to changes in the status of members, newsworthy items, etc.
5. Committee membership is a valuable means of maintaining membership. Committee work keeps the members of the auxiliary working at the job of belonging to it and participating in its affairs.
6. An auxiliary should be kept up to date and in tune with the times. If this is done, and other responsibilities are fulfilled, then membership maintenance problems will be kept at a minimum.

Members should be kept informed of, and inspired by, the worthwhile and constructive activities of the auxiliary through the official organ. She must be kept sold on the benefits personally, or she is apt to ask, "What am I deriving from the auxiliary?" New members, especially, should be appointed to committees to carry out, in some measure, the activities of the group. Records should be kept of the causes of resignation and lapses of membership and the group should endeavor to carry out such activities as are necessary to correct the causes of dissatisfaction. A healthy treasury balance should be maintained which gives a feeling of security, provide interesting programs and well-balanced meetings carefully planned and conducted. New members, too, should be encouraged to at-

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TECHNIQUES IN FOOT SURGERY

L. R. McCAIN, D.S.C., F.A.C.F.S., and N. H. KETAI, D.S.C., F.A.C.F.S.
Editors, Publications Committee, A.C.F.S.

Illustrated case reports and discussions, suggesting approaches to chiropodical surgery, from the files of the American College of Foot Surgeons.

A SURGICAL APPROACH FOR REMOVAL OF A NEURINOMA

A white woman, aged twenty-one, seen in the office presented symptoms of a neurinoma between the third and fourth metatarsal heads of the left foot.

Findings and physical examination were not significant.

The patient was given 1½ grains of Sodium Seconal®[1] preoperatively.

Procedure: Anesthesia to the area was effected by use of infiltration. Four cc. of Novocaine®[2] 2%, Adrenalin 1:50,000 was used.

A three centimeter incision was made dorsally between, and parallel to the third and fourth metatarsal heads, and extending proximally from the web. The incision was deepened by blunt dissection until the metatarsal heads were exposed. A self-retaining retractor was inserted. The toes were plantar flexed, and the metatarsal heads were pushed dorsally with the thumb to expose the nerve. The tumor was dissected free and removed by cutting the nerve just proximal to the tumor first, and then two digital nerves. Closure of the deep tissues was effected with three interrupted 000 chromic catgut sutures. Closure of the incision was made with four 000 dermal sutures. The area was dressed and an elastic bandage applied.

C. W. Corbett, D.S.C.

The patient was given a prescription for six Empirin Compound ®[3] tablets to be taken every four hours if necessary for pain.

Postoperative treatment was as follows: The second day following surgery dressing was made using Tincture of Merthiolate, ®[1] 3x3 sterile gauze sponges, roller bandage and a tensor bandage. On the seventh day postoperatively the same type of dressing used. On the ninth day after surgery, Aureomycin surgical powder ®[4] was used on the incision, and sterile redressing applied. On the eleventh day the sutures were removed, Tincture of Merthiolate applied, and sterile dressing applied. On the fourteenth day the patient was dismissed.

Comments:

This is the accepted procedure for removal of a neurinoma between the third and fourth toes. It should be noted that the tumorous mass lies between the bases of the proximal phalanges of these two toes.

Also, it is very often good technique to use Gelfoam®[5] in the wound to help prevent a hematoma.

It is always necessary to have a pathologist's report after this surgery as there are case histories of malignant synovioma, bursa, and cystic formations being found in this location.

L.R.M. and N.H.K.

®[1] Eli Lilly & Company.
®[2] Winthrop-Stearns.
®[3] Burroughs Wellcome & Co.
®[4] Lederle Laboratories.
®[5] Upjohn Company.

A Surgical Approach for Complete Excision of Onychogryphotic Nails

A white woman, aged forty-five, seen in the hospital, presented an onychogryphosis of the nails of the third and fourth toes of the right foot. Serological examination re-

vealed Hemoglobin 13.5 grams, W.B.C. 4,900, R.B.C. 4,420,000, and a differential of Polys. 50, Lymphs. 44, and Mono. 6.

Anesthesia was effected by means of a toe block to each of the toes, using Monocaine®[1] 1%, 5cc.

Procedure: A transverse incision was made proximal to the matrix across the dorsal aspect of the toe. A second transverse incision was made distal to the nail. The incisions were joined laterally by "V" incisions. The nail plate, bed and matrix were resected en masse by sharp dissection. The distal half of the distal phalanx was removed, and the end of the shaft smoothed with a bone rasp. The tissues were approximated and closed using three 000 silk interrupted sutures.

Essentially the same procedure was used for the third toe of the right foot.

Postoperative treatment was as follows: A sterile pressure bandage was applied to the foot. The next day pressure bandage was removed, and a new outer dressing applied. On the sixth day postoperatively the entire dressing was removed and a new sterile dressing applied. On the eleventh day following surgery the sutures were removed, and a dry sterile dressing applied. On the sixteenth day the patient was told to use Domeboro®[2] soaks. t.i.d. to reduce swelling. On the twenty-third day the patient was dismissed.

Postoperatively the patient was given a prescription for Empirin®[3] Compound with Codeine #3, Tablets #6, Sig. One tablet every three hours if necessary.

S. Neil Jacobs, D.S.C.

Comments: A partial amputation for removal of onychogryphotic nails of the lesser toes, is the procedure of choice. However, it has been found that a distally curved incision proximal to the matrix, and extending down each side of the toe, together with a proximally curved incision distal to the nail plate and joining the ends of the original incision, will give excellent coaptation and cosmetic effect.

L.R.M. & N.H.K.

®1 Novacol Co.
®2 Dome Chemicals
®3 Burroughs Wellcome & Co. Inc.

Collins

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candor on the part of the operator will generally preclude serious consequences.

318 East State St.

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Women's Auxiliary

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tend the conventions in order that they may become more conscious of the objectives and activities of the auxiliary.

Finally, it should be remembered that membership maintenance and promotion is one of the important activities of the auxiliary, because the success of it makes it possible to carry out the basic purposes of the auxiliary.

Remember that the Golden Rule should be put into effect in relations with your associates as well as the public, that in auxiliary work, as in life itself, the respect and acceptance accorded by others is the deepest test of success. There is no substitute for loyalty. Think well of the chiropody auxiliary you work for. Stand by it and the wonderful profession it represents. As a chiropody wife, this is your investment in its future.

MIRIAM SHOR, R.N., President
Women's Auxiliary, N.A.C.

THE PODOPEDIATRIC CLINIC

JOHN T. SHARP, D.S.C.
Chairman, Committee on Children's Foot Health

This section is devoted to a discussion of the problems peculiar to the child's foot. A separate subject will be considered each month, on a question and answer basis. Members are invited to send in their questions relative to the various phases of podopediatrics. Questions will be answered in accordance with the heading under which they fall.

LABORATORY EXAMINATIONS IN PODOPEDIATRICS

What is the chief use of laboratory examination in podopediatrics?

Probably the most valuable use to which the various laboratory examinations may be put is in differentiating between purely local or foot lesions and lesions which are actually local manifestations of systemic disease.

What are some of the tests or examinations used in podopediatrics?

Some of the more valuable tests are: the complete blood count, the erythrocyte sedimentation rate, urinalysis, the serum alkaline phosphatase, and the antistreptolysin 0 determination.

What are the normal values in a complete blood count in the child?

In children between the ages of 1 and 12 years, the normal values are as follows:

Total Red Cells (per cu. mm.) — 4,500,000 to 5,000,000

Total White Cells (per cu. mm.) — 9,000 to 8,000

Platelets (per cu. mm.) — 250,000

Hemoglobin (Grams per 100 cc. — 15.6 Grams being equal to 100%) — 12 to 14 grams or 78 to 90%

Differential:

Polys. — 40 to 60%

Lymphocytes — 50 to 30%

Monocytes — 5 to 8%

Eosinophils — 2%

Basophils — 2%

Percentage of reticulocytes in total red cells — 1%

In the foregoing values, the first figure mentioned is considered normal at the lower end of the 1 to 12 year age range, while the second figure is normal for the upper or older end of the range.

What is the erythrocyte sedimentation rate?

This is very briefly a laboratory procedure which measures the rate of fall of the erythrocytes in a blood specimen which is mixed with an anticoagulant and placed in a specially designed tube. There are several methods of determining the erythrocyte sedimentation rate, and each of these has its own standard of normalcy.

What is the normal sedimentation rate?

Since there are several different procedures, there are also differences in normal readings. The more commonly employed tests together with the normal reading for each are as follows:

The Cutler Method — Males, 10mm. per hour, Females, 12mm.

The Wintrobe Method — Males, 3.5mm, Females 9.5mm. per hour.

The Westergren Method — Males, 1 to 3mm per hour, Females 3 to 7mm.

The Linzenmeier Method — Males, 350 to 1500 minutes, Females, 300 to 600 minutes.

What is the significance of an elevated sedimentation rate?

It should be mentioned that this is not a specific or pathognomonic test for any given disease. It is, however, most helpful in differentiating between mechanical problems and infectious ones, in estimating the activity of active infections (for example rheumatic fever), and in distinguishing between benign and malignant tumors. Elevation of the sedimentation rate may be

produced by any active infection, or any process where there is active tissue destruction. It may also be elevated by rapidly growing malignancies, by severe anemias, and by heavy metal poisoning.

What is the serum alkaline phosphatase determination?

This test is done to determine the amount of the enzyme *alkaline phosphatase* in the serum. This enzyme has the ability of separating inorganic phosphate from organic compounds of phosphorus, and as a consequence is vital in bone metabolism. From a practical standpoint, we may say that an increased serum alkaline phosphatase indicates increased osteoblastic activity. Since the osteoblasts are concerned with bone repair and the deposition of new bone, an increase in their activity beyond the normal rate usually suggests bone destruction in some form. Consequently, the serum alkaline phosphatase is raised in bone malignancies, in rickets, in hyperparathyroidism, and in osteomalacia. It may also be mildly elevated during the active repair stage of severe fractures.

What is the normal serum alkaline phosphatase?

This test is measured usually in what are termed "Bodansky Units". The normal reading in children is from 5 to 15 of these units.

What is the "antistreptolysin 0" Determination?

Antistreptolysin 0 is one of the antistreptococcic antibodies found in the blood of people who have had hemolytic streptococcal infections. This antibody has the property of neutralizing *in vitro* the extracellular toxin produced by the hemolytic streptococci. The test itself consists of a titration of the amount of the antistreptolysin 0 antibody present in the patient's serum. Results are expressed in units, and titers of over 200 units are usually regarded as abnormal.

What is the significance of an elevated antistreptolysin 0 Titer?

An elevation of this titer indicates that the patient in question has suffered a hemolytic streptococcal infection. This is significant in instances where a patient apparently has rheumatic fever in the absence of any history of preceding streptococcic infection. It is known that rheumatic fever is produced by a Group A hemolytic streptococcus. Although this test does not definitely indicate the actual presence of rheumatic fever, it does reveal the fact that the patient in question has been exposed to the organism which is capable of producing this disease.

Podokinetics

(Continued from Page 387)

study and care of kinetic deficiencies marks a future trend of orthopedic development. Current emphasis upon orthostatics will yield to growing interest in podokinetics.

48 East Central St.

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PHARMACEUTICAL PREPARATIONS FOR THE PROFESSION

HARRY L. HOFFMAN, Ph.G., D.S.C.
Chairman, Council on Chiropodical Therapeutics and Pharmacy

A column devoted to preparations, new and old, with emphasis on their value and uses in everyday chiropody practice. This will be a regular monthly column and we invite questions, which we shall endeavor to answer, or obtain the answer.

Pentids
Penicillin preparation, oral

Description: Each scored tablet (compressed tablets), contains 200,000 units of crystalline penicillin G potassium buffered with calcium carbonate to prevent inactivation by gastric juice.

Action and Uses: Oral penicillin causing fewer side reactions, convenient, pleasant to take. Except in overwhelming infections requiring massive doses of parenteral penicillin, oral penicillin is preferred. For use in the treatment of mild and moderately severe infections due to penicillin susceptible organisms.

Administration: Orally, 200,000 units or its multiples, 3 times a day ½ hour before meals or at least 2 hours after meals.

Supply: Pentids—Tablets in bottles of 12, 100, 500. E. R. Squibb & Sons.

Typical Prescription:

℞ Pentids Tablets,
(Squibb)
Disp. No. 12.

Sig: One (1) tablet t.i.d. two hours after each meal.

Pentid-Sulfas Chemobiotic

Description: Each scored tablet (compressed tab.) contains: Crystalline penicillin G potassium—200,000 units; Sulfadiazine—0.167 Gm.; Sulfamerazine—0.167 Gm.; Sulfamethazine—0.167 Gm.

Action and Uses: A penicillin-sulfonamide combination for use in the treatment of infections due to penicillin-sulfonamide susceptible organisms (hemolytic streptococcus, pneumococcus, staphylococcus) prior to or following surgery, particularly in patients with a history of rheumatic or congenital heart disease. (For prophylaxis of infections due to these organisms (hemolytic streptococcus, pneumococcus, staphylococcus) prior to or following surgery.

Administration: Orally, 1 or 2 tablets 4 times daily ½ hour before meals and at bedtime.

Supply: Pentid-Sulfas—Tablets, scored—in bottles of 30, 100, 500. E. R. Squibb & Sons.

Pentids Soluble Tablets
Penicillin preparation, oral

Description: Soluble penicillin tablet containing 200,000 units of penicillin G potassium.

Administration: Intended for use by the pediatrician for infants and children and for adults who object to swallowing ordinary tablets. Readily soluble in water, milk formulas and fruit juices.

Supply: Bottles of 12 and 100. E. R. Squibb & Sons.

Menthofax
Rubefacient Analgesic Ointment

Description: Rubefacient analgesic. Contains 40% methyl salicylate, with menthol, camphor and eucalyptol, in a base which favors absorption.

Indications and Uses: Lumbago and other myalgias, sprains and painful joints, arthritis, stiffness following exercise.

Directions: May be applied to the unbroken skin of the affected area with or without rubbing. May be covered with a dressing, or not, as desired.

Supply: In tubes of 1 oz. By Burroughs Wellcome & Co., Inc., One Scarsdale Road, Tuckahoe 7, N. Y.

Typical Prescription
Disp. No. 1 tube
Sig: Apply twice daily.

Toilet Lanoline with Solid and Liquid Petrolatum

Description: An emollient of uniform creamy consistency; pleasant odor; does not become rancid.

Indications: Excessive dryness of skin; scaly, rough skin; chapped hands. Used in care of feet of diabetics.

Administration: Apply as required to affected area with or without rubbing or massage; cover with gauze dressing if desired.

Supply: In tubes of ¾ oz. and 1¾ oz.; jars of 1 lb. By Burroughs Wellcome & Co., Inc., One Scarsdale Road, Tuckahoe 7, N. Y.

Typical Prescription
Rx Toilet Lanoline
B & W
Disp. No. 1 tube
Sig: Apply T.I.D.

Ultran

Description: This is a new and safe rapidly effective and mild acting tranquilizer. Pharmacologic studies demonstrate that Ultran possesses characteristics in common with the interneuronal blocking agents.

Action and Uses: Ultran combines smooth control of the chronically apprehensive patient with rapid relaxation, freedom from side effects, and simplicity of use.

Administration: Orally administered, Ultran quickly allays hyperexcitability, anxiety and tension without dulling mental alertness or awareness. May be administered at bedtime to promote a restful night's sleep.

Indications: Ultran useful when a mild tranquilizing or relaxing effect is desirable. Highly beneficial in patients who are afflicted with emotional instability, anxiety-tension states or functional disorders and has a *wide range of application* in clinical conditions in which an emotional component is prominent.

Dosage: Average—one pulvule (300) mg. t.i.d. when desirable, 2 pulvules may be administered at bedtime to promote a restful night's sleep.

No contraindications.

Supply: Pulvules No. 360—300 mg. pulvules (capsules) in pkgs. of 100 to a bottle.

Noted Advantages: Ultran does not impair the mental or visual acuity of the patient; no contraindications for its use; considered extremely safe.

Typical Prescription
Rx Pulv. Ultran
(Lilly)
Disp. No. XXX
Sig: One (1) t.i.d.

Cogentin (Methanesulfonate)

Action and Uses: Cogentin is recommended for use in the symptomatic and palliative treatment of all etiologic groups of Parkinson's syndrome, arteriosclerotic, postencephalitic or idiopathic.

Indications: It is mainly effective in relieving severe Parkinsonian rigidity and contracture and ameliorating associated symptoms such as tremor, drooling, and pain due to cramps and muscle spasm. Leg cramps.

Administration and Dosage: Usual dose is one to 2 mg. daily by mouth.

Typical Prescription:
Rx Tabs Cogentin (S&D) 2 mg.
Disp. No. 12
Sig: ½ scored tablet at bedtime.

ABSTRACTS FROM THE CHIROPODY LITERATURE

ROBERT SHOR, D.S.C.
LOS ANGELES, CALIF.
Chairman, Committee on Publications

Editors of Local, State and Regional Publications are requested to provide copies to the Chairman of the N.A.C. Committee on Publications who is preparing this section of the Journal.

BRITISH CHIROPODY JOURNAL

Hyperidrosis, C. I. Stewart, British Chir. J., 4:91-92, April 1957.

Hyperidrosis is sometimes vaguely referred to as a possible disturbance in the central or sympathetic nervous systems, or innervation of the feet, or faulty hygiene, occlusive footwear, etc. Undoubtedly, these factors have an effect but due attention to these still leave us with excessive perspiration.

Stewart submits this condition is of very simple origin as are many of the conditions affecting human beings. We are often inclined to overlook the simple cause in search for the obscure.

Hyperidrosis is generally accompanied by a condition of hypertension which may be general or local. There is also a condition of weak or strained foot. The weak foot may be resultant of the hypertension interfering with circulation or the hypertension may be the result of foot strain—a reflex protective spasm.

Effective treatment is directed towards the elimination of the basic cause of upset —attention to the hypertension and weakened tissue state by means of massage and support.

Hyperidrosis is a symptom and not a disease in itself. It is a result of hypertension, faulty circulation with consequent low nerve and muscle tone.

JOURNAL OF PODIATRY

Chiropodical Uses of Silver Nitrate, J. C. Dagnall, M.Ch.S., J. of Podiatry, 4:10-14, May 1957.

Runting, in his *Practical Chiropody,* 1925, wrote: "No matter what aptitude a chiropodist may show in dealing with general affections of the foot, or what operating skill he may have developed, there is no doubt that one of his greatest assets is the capacity for being able, cleverly and painlessly, to enucleate a corn." One might add; and then apply appropriate local treatment.

Silver nitrate remains today one of the most valuable drugs available to us, facilitating the removal of corns and reducing the rate of their development.

In strength silver nitrate acts by coagulating the albumin and chlorides of the tissues, to form a thick tough albuminate. It subdues inflammation and induces resolution, and the healing processes.

Dagnall discusses the use of silver nitrate in onychocryptosis, onychophosis, interdigital soft corns, digital hard corns, plantar hyperkeratotic plugs, fungus infection, and verrucae.

INDIANA PODIATRY JOURNAL

Static Latex Shielding, Irving H. Block, Ind. S. Podiatry J., 21:1-21, May, 1957.

Latex shields made over a plaster cast with the foot at rest is not a new practice in the field of practical shielding. This is rather a review of the casting and fabrication of a simple latex shield done from beginning to end by the chiropodist.

Block describes the fabrication of a simple hammer toe, or lessor toe shield. Bunion shields are made essentially the same.

The original article was printed in Florida Footprints, and the review in technique was intended to stimulate more practitioners to prescribe and make their own latex shields.

WISCONSIN JOURNAL

Liquid Nitrogen in Dermatology—A Successful Method of Treating Plantar Warts, Joseph B. Mathewson, M.D., J. Wisc. Soc. of Chiropodists, 1:3-5, May, 1957. (Reprint from N.Y. J. of Pod.)

The record of freezing agents being used in dermatology is briefly discussed. Mention is made of Campbell White's report in 1899; Whitehouse in 1907, Gold in 1910, and Kile and Welsh in 1948.

The first report on the use of liquid nitrogen in dermatology was by Arlington in 1950. He pointed out that liquid nitrogen is readily obtainable in urban areas, is not inflammable, and is colder (-321 F.) as compared with liquid oxygen (-250 F.) and CO2 snow (-89F.). Liquid nitrogen is a satisfactory freezing agent for treating warts, superficial scarring, superficial hemangiomas, keloids, and dermatitis venenata.

The paper describes the author's experience in treating planter warts over the past 8 years, reporting on 63 patients having 79 plantar warts. Included in this series of plantar warts are large, small, superficial, deep single, multiple, mosaic or so-called neurovascular corns.

The wart is outlined with ink and freezing is accomplished by applying liquid nitrogen to the wart with a cotton-tipped applicator. By using two applicators the freezing is continuous; one applicator held in contact with the wart, the other resting in the flask. The wart is frozen for 15 minutes. Depth of freezing is regulated by the amount of pressure exerted. No thawing is permitted once the treatment is begun. The secret of the success of this method is the formation of a good blister or bulla beneath the wart.

As a rule this bulla is left intact for one week when it is opened at the edge, drained, and the entire wart-bearing epidermis is cut away. Postoperative infection has never been encountered. There is no postoperative scar and pain is minimal after the wart is excised.

MISSOURI BULLETIN

Foot Imbalance in Children, Paul W. Meyer, M.D., The Missouri Bulletin, 4:3-5, June 1957.

"In the foot of the child, faulty tendencies in development may be recognized early and corrective measures taken. Unfortunately the non-interest by the medical profession in the care of foot abnormalities has been attributed to the lack of training and understanding of foot imbalance.

In children, we are inclined to forget or apply the old aphorism, "as the twig bends, so will the tree incline." The antiquated opinion that flatfoot, bowleg, knock knee, tibial torsion, etc. are untreatable and must be accepted as they are, is no longer defensible. These feet must be protected and treated from infancy.

The most common form of imbalance in the child is faulty lateral balance. The fault of lateral balance takes the form of pronation and implies disturbance in both postural and structural stability. Dr. Meyer defines postural and structural stability and continues with a discussion of pronation in children, as well as knock knee, bowleg, and tibial torsion.

The article tends to show the importance of careful supervision of the foot in childhood and to encourage its development along normal lines. The most important element in the care of correcting the foot is that it be maintained in a position of balance.

DIGESTS FROM THE LITERATURE

Anyone wishing to read the complete article, if not available in your local library, may borrow it through interlibrary loan. A microfilm may be borrowed from the National Medical Library, Washington 25, D. C., or a photo-duplication may be obtained from that library at a cost of fifty cents for five consecutive pages.

ANESTHETICS

Principles of Resuscitation in the Dental Office, M. S. Sadove and G. M. Wyant. J. Amer. Dent. Assn. 53: 168-74, 1956.

The accidents which occur in a dental office are usually slight and respond to oxygen administered with the patient prone and legs elevated. If the patient does not respond to this treatment, stimulants and vasopressure drugs are required. The basic physiologic principles underlying oxygen supply and circulation are briefly discussed. Accidents may be avoided if a thorough history of the patient is obtained, including previous reactions to anesthetics, the drugs being taken regularly and any chronic condition being treated. The equipment required for resuscitation is described and the measures to be taken. Drugs which should be at hand included phenylephrine hydrochloride, hyaluronidase, pentothal, normal saline, seconal or pentobarbital, atropine sulfate, and aromatic spirits of ammonia.

CIRCULATORY SYSTEM

Management of Varicose Veins, Mims Gage. Geriatrics 11: 212-16, 1956.

Varicose veins are due to incompetent valves in the four systems of veins in the lower extremities: (1) the internal saphenous system, (2) the communicating or perforating veins, (3) the short saphenous system, and (4) the deep veins of the calf and thighs. Early varicosities are difficult to detect. Various tests to determine the efficacy of the valves are described, including the Trendelenburg-Brodie test, the Mahorner-Ochsner test, percussion, and various pressure tests. Treatment is directed to restoring the superficial and communicating systems to competency; not only the saphenous system but all communicating incompetent veins must be ligated. This is best done by severing them from the main venous trunks by stripping the long and short saphenous. Smaller collaterals may be injected with a sclerosing solution such as sodium morrhuate. Following operation, the patient is instructed to wear an Ace No. 8 bandage or elastic stocking for several months. An elastic stocking will have to be worn for the rest of one's life if the varicosities are associated with a postphlebitic syndrome.

Reynaud's Disease Studied by Hypnosis, A. Norris and P. Huston. Dis. Nerv. Syst. 17: 163-65, 1956.

Hypnosis was used in investigation of possible psychological factors in a case of Reynaud's disease in a woman aged 27. She had blanching of fingers, hands and feet, with periods of complete remission. As circulation returned to the skin it was accompanied by hyperemia and excruciating pain. Administration of ACTH and cortisone brought quick response. After the drugs had been discontinued she complained only of transient spasms in her fingers and toes. Under hypnosis she related many experiences dating back to childhood. No loss of love object nor other stress was found which might have precipitated the attacks. Emotional factors such as anger or fear could bring on attacks but did not produce exacerbation during an attack.

The conclusion was that the psychodynamics of this disease heretofore reported are not adequate nor specific.

Diseases of the Peripheral Veins in the Aged, E. L. Lowenberg. Geriatrics 11: 275-83, 1956.

Varicose veins long asymptomatic may cause severe complications later in life. Acute massive superficial thrombophlebitis in varicose veins occurs after the condition has been present for 20 or more years. Phlebothrombosis and femoroiliac thrombophlebitis are common in the ambulant, apparently healthy, aged patient. During hospitalization for cardiac disease, for surgery, or for treatment of fracture, deep vein phlebitis is a real hazard. Surgical eradication of varicose veins is not advised in every elderly patient, when the varicose veins are not large or growing worse, if they are asymptomatic and if no complications are present. Use of elastic supports, avoidance of prolonged standing, and taking one or two rest periods daily, lying down with the legs moderately elevated, is the preferred treatment. Sclerotherapy is not advised even if the varicosities are large, since thrombosis rather than sclerosis may result. Radical and extensive surgery is advisable when the varicosities are large and painful, when stasis dermatitis persists, and when stasis ulceration is present. The operation helps to lighten the cardiac load. When selecting patients for surgery, a complete history and physical examination are necessary, including electrocardiogram, tests of blood sugar, non-protein-nitrogen blood, and phenolsulfonphthalein renal function test, and an urologic consultation if there is an indication of residual urine or prostatism. Peripheral arterial insufficiency is a definite contraindication, but not hypertension, diabetes, or asthma, and not an episode of coronary thrombosis if cardiac reserve is good and if the coronary attack took place at least six weeks before. Careful evaluation of the arterial circulation to the extremities is imperative; delayed healing may lead to gangrene, and, later, amputation. The types of surgery recommended, prevention of shock, and types of postoperative anticoagulant therapy are described. When acute spontaneous thrombophlebitis occurs as a complication of varicosities, immediate surgery is recommended, consisting of high saphenous ligation plus removal of the varicosed saphenous system, including the thrombophlebitic area. Treatment of stasis dermatitis and varicose leg ulcers is described, and the procedures used in chronic indurated cellulitis complicating varicose veins, also phlebothrombosis of the deep veins of the extremities, acute iliofemoral thrombophlebitis, and treatment of the aged patient who has survived pulmonary embolism.

Diagnosis and Treatment of Thromboangiitis Obliterans, N. W. Baker. Minnesota Med. 39: 303-06, 1956.

Diagnostic criteria of this disease include endothelial proliferation, thrombus occluding the lumen, cellular organization in the thrombus, and diffuse panangiitis, without necrosis of the medial coat. The small and medium sized arteries (posterior and anterior tibial and major digital arteries) are primarily affected, and frequently the veins accompanying these veins. The disease progresses into the large arteries. It may be confused with arteriosclerosis obliterans, peripheral arterial thrombosis, scleroderma, Raynaud disease, etc. Intermittent claudication is almost pathognomonic, and occurs in the calf or in the arch of the foot. Impairment or absence of pulsations in many of the greater arteries of the extremities is a manifestation of chronic occlusive arterial disease, but these signs in a dorsalis pedis artery may not be significant of this disease. Thromboangiitis obliterans occurs in women in about only one per cent of cases; but occurs in 15 to 20 per cent of cases of arteriosclerosis obliterans in women; the

former occurs in most cases before the age of 40 and the latter after 40. Distinctive indications of arterial obliterans rather than thromboangiitis obliterans are x-ray evidence of calcification in the femoral or iliac arteries, the presence of diabetes, increased plasma cholesterol and lipides, and systolic bruit over a femoral or iliac artery and the abdominal aorta.

Conservative treatment consists of abstinence from smoking, care of the extremities against trauma and antibiotic therapy for ischemic ulceration and minor gangrenous lesions, and conservative amputation or debridement for massive gangrene of the digits. Surgery on the foot or toes is postponed if occlusive arterial disease is present. Cases with ulcerative or gangrenous lesions require hospital treatment. Warm soaks with a solution of boric acid are applied for 20 to 30 minutes two to four times a day, and dry dressings between soaks. Undertreatment is better than over-treatment. Sympathetic ganglionectomy is helpful in many cases unless the disease is mild; it is useless in cases with advanced ischemia and gangrene in the foot. Surgery is not performed until local infection and inflammation have disappeared. Amputation of the leg should be delayed as long as possibe.

Circulatory Changes During Muscular Work in Man, A. Holmgren. Scand. J. Clin. & Lab. Invest. 8: Supp. 24, 1-97, 1956.

This monograph reports a study of intravascular pressures in 35 healthy males. Arterial blood pressure during muscular work and during transition from rest to work; changes of the central venous pressure during work; and changes of the total blood volume during work are discussed.

Treatment of Segmental Arteriosclerotic Occlusive Disease of the Lower Extremities, M. F. Bryant. J. M. A. Georgia 45: 311-14, 1956.

Four cases of atherosclerotic segmental arterial occlusion, treated by re-establishment of the continuity of the artery are described in patients aged 35 to 55. They complained of pain in the extremities during walking. Routine arteriograms under anesthesia should be performed in all patients having pulses absent at the femoral or popliteal regions. The colloidal iodine solution should not exceed 35 per cent for femoral arteriograms. Such studies should be made early and frequently. In some cases local anesthesia may be used. Urokon 70% is recommended as a contrast medium. When the popliteal artery is patent, continuity of the vessel may be restored by grafting. Obstructions below the bifurcation of that artery should be treated by lumbar sympathectomy, together with the usual conservative measures. Patients with long segmental occlusions in the femoral artery may be treated by the by-passing procedure, but superficial occlusions may be treated with sympathectomy and grafting.

Arteriosclerotic Syndromes: Niacinamide Hydroiodide (Parenteral) Treatment, T. M. Feinblatt, H. M. Feinblatt, et al. Med. Times 84: 741-44, 1956.

Because of greater longevity and improvement in specific medical treatment, an increasing number of persons suffer from the arteriosclerotic syndrome. The signs and symptoms are of two types: psychic reactions (emotional instability, depression, and confabulation) and physical reactions (vertigo, headache, vague abdominal distress, insomnia, loss of appetite, hypertension). Treatment with niacinamide hydroiodide, given parenterally twice a week for two months, produced some alleviation in every one of 50 patients having an average age of 61.3 years. No untoward effects were noted.

Atherosclerosis in this country begins in childhood; the lipid deposition rate in the arterial intima is greatest in the first year of life, at the time of adolescence, and in early middle-age. The high incidence in the United States is related to the high value of the "normal" plasma cholesterol level in the average American; one-seventh of all deaths from all causes is due to this disease. With many of our diets deficient in amino acids, minerals and vitamins, fat

intake has increased from 30 per cent of the total calories to 40 per cent within the past four decades. Lipotropic factors have not proved helpful in prevention of atherosclerosis. Reduction of the total fat content of the diet does lower serum levels of cholesterol and *B*-lipoproteins; substitution of plant fats for animal fats causes considerable fall in cholesterol and phospholipid. However, atherosclerosis is not only a dietary disease; it results from our mode of living — processed foods, plus hormonal, racial, sexual and anatomical predispositions. A low fat, low cholesterol, liberal protein diet to offset the tendency to early onset of atherosclerosis has been recommended.

DERMATOLOGY, ALLERGY, FUNGUS DISEASES

Physical and Physiological Clues for Diagnosing Eczema, W. C. Lobitz, Jr., and R. L. Dobson. J.A.M.A. 161: 1226-29, 1956.

The attending physician must consider all physical and physiologic factors characteristic of the patient susceptible to atopic eczema. There are multiple causes for this disease, ranging from allergic contact dermatitis to a functional neurodermatitis; the most difficult of the dermatites to understand is atopic eczema. This patient has an abnormally high incidence of atopic diseases (hayfever, asthma, eczema) in himself and in his family. The patient may develop an infantile eczema, a childhood eczema (6 to 10 years of age), or adolescent or adult form (13-80 years). Characteristics in these patients are pallor due to constant cutaneous vasospasm; hyperpigmentation around the lower eyelid, giving a tired look; a small pleat or groove of the lower eyelid, present at birth; a dry skin and occasionally a frank ichthyosis; scaling and chapping, most pronounced on the extensor surfaces of the extremities. A cholinogenic urticaria may develop in response to emotional or heat stimuli. The blood pressure is low, but rises into hypertension range during the cold pressure test. Immediate positive reactions to skin tests are more common in these patients than in the normal individual; a pustular wheal results within 48 hours to a patch test with 5 per cent solution of nickel sulfate. Cataracts develop in 10 per cent of these patients. Allergic and emotional factors must be given careful consideration in evaluating susceptibility to atopic eczema.

A New Sclerosing Mixture for Varicose Veins, H. I. Biegeleisen. Med. Times 84: 380-84, 1956.

Verisol (a mixture of invert sugar, sodium chloride and phenylethyl alcohol) with procaine in a total of 1,123 injections in patients aged 18 to 80 and having varicose veins, produced slight to moderate cramping for 10 to 30 seconds in only 17 per cent of cases. Backache due to rapid movement of the solution into the vena cava occurred in about 1 per cent of patients. Only one patient had a true allergic reaction with urticaria occurring within 5 minutes, but was controlled by 3 to 6 minims of adrenaline. In 4 cases flushing of the face occurred and was relieved by administration of 4 minims of adrenaline. There is little tendency to pigmentation and the thromboses are flatter and disappear sooner than with any other sclerosing agent.

Mechanics of Diagnosis in Allergic Disease, M. L. Maurer. GP 14: 74-77, 1956.

An allergy is an artificially induced hypersenstitiveness due to repeated exposures to some specific stimulus. Hayfever and asthma are not inherited but an individual may be atopic, that is, he has a familial background of allergy so that he has a tendency to become sensitized. It has been shown that if allergy exists in both parents 3 of 4 offspring will have some clinical allergy by the age of 10; of these, 36 per cent will show symptoms in the first five years. If only one parent is allergic, 50 per cent of the offspring will become allergic

by the age of 30; of these the largest percentage will have an allergy within the ages of 10 to 15. Bacterial allergy in many cases has a hereditary background. The symptoms of allergy are described, including immediate and delayed reactions. Skin tests are valuable adjuncts in determination of the cause. They include cutaneous tests, indirect methods of passive transfer, mucous membrane tests (ophthalmic or nasal), patch tests, and clinical tests such as trial and error verification tests. The history of the patient is most important in making the diagnosis. History-taking outlines are presented.

Antifungal Activity of a New Group of Salicylamide Derivatives for Dermatophytes. I. In Vitro Activity of N-Butyl-3-phenyl Salicylamide, K. A. Hok, A. Y. Hamilton, et al. Antibiotics & Chemoth. 6: 456-64, 1956.

This new salicylamide was found to have pronounced inhibitory activity for fungi of the dermatophyte group. The dermatophytes readily absorbed dilute solutions of the compound, and bound it firmly so that it was not removed by washing in solvents in which it is usually soluble. This may be due to physiochemical affinity between the compound and the cell wall of the dermatophytes. Since saprophytic fungi are not inhibited in this way, it is suggested that there is a structural difference in the surface of the cells of these organisms. Further pharmacologic and clinical study in use of this compound will be reported later.

Herpes Simplex: A Dermatologic Enigma, E. R. Trice and R. W. Fowlkes. Virginia M. Mo. 83: 332-36, 1956.

Herpes simplex occurring on the trunk or extremities is difficult to diagnose and may be confused with pyoderma, dermatitis venenata, or herpes zoster. Diagnosis is easier if the disease has occurred before on the same site. Although virus isolation and identification is a precise diagnostic procedure, it is too expensive to be used routinely. Most treatments have proved ineffective. Antibiotic therapy only gives a soothing effect, which can be provided by any simple non-medicated emollient. The analogues of hydrocortisone are contraindicated as they may prove detrimental. Smallpox vaccines have sometimes prevented recurrence, but the reason is unknown. Eruptions may be aborted in some cases by small doses of superficial radiation at a site of former occurrence which begins to tingle, signaling a new attack. Severe primary herpetic infections in children require supportive pediatric care.

Permeability of Skin to Some Non-Electrolytes, J. E. Treherne. J. Physiol. 133: 171-80, 1956.

The penetration of a series of ^{14}C and ^{35}S labeled non-electrolytes through skin taken from freshly killed rabbits was measured in order to determine some of the physico-chemical factors involved in the penetration of skin. It was found that the barrier to diffusion through the skin lies in the epidermis and that the rate of penetration is related to the ether / water partition coefficient. A time delay in penetration of skin was found related to the permeability of the diffusing substance, the slowly penetrating substance showing long delay periods. Autoradiographs of ^{35}S labeled thiourea indicated that a layer of material was retained in the epidermis. This layer was concentrated in a region between the stratum corneum and the Malpighian layer, corresponding to the position of the stratum granulosum, which is probably the site of the barrier to effusion through the epidermis. It was concluded that the barrier is lipoidal in nature and that the barrier is probably in the form of an aqueous phase separating two lipoid layers. The experiments indicate that diffusion through the dermis is similar to that through a large-pored membrane, and that the process is one of diffusion through the liquid in filled extracellular spaces.

Sedimentation Studies of Epidermal Keratins; Keratin A and Keratin B, B. A. G. Matoltsy. J. Biophys. & Biochem. Cytol. 2: 361-63, 1956.

The sedimentation behaviors of these electrophoretically homogeneous keratin preparations were determined by ultracentrifugal analyses. Both preparations revealed two fractions, one sedimentating rapidly and the other slowly. The asymmetric patterns suggest that each fraction is polydisperse. Both preparations are heterogeneous with respect to particle size.

Use of Polarized Light in Diagnosis of Mycotic Infections, L. Potenza and M. Feo. Am. J. Clin. Path. 26: 543-51, 1956.

Material from human mycoses and experimental mycotic lesions in animals was examined under polarized light, and fungi were distinguished from certain parasites which are morphologically similar, such as leischmanial forms. In every instance the cells of the fungi were optically active, some of them showing polarization "crosses." Adoption of polarized light as a technique in the histopathologic diagnosis and investigation of mycotic infections seems justified because of the ease with which polarizing filters may be used on microscopes and the speed with which sections may be scanned. While not replacing certain staining methods in microscopic study of fungi, this method should be a valuable aid.

Eccrine Sweating: Some Aspects of Research and Clinical Applications, A. Rothenberg. Bull. Tufts-New England Med. Center 2: 38-47, 1956.

A review is presented of the various views regarding the sweating function and the suggested new means of dermatologic therapy. The three types of eccrine sweating disturbance are hyperhidrosis, dyshidrosis and anhidrosis, or hypohidrosis. Anhidrosis and sweat retention are not the same, since the former term applies to absence or reduction for some cause, while sweat retention applies only to cases where sweat is absent on the skin because it is retained beneath it. Various methods are used to relieve sweat retention, but they are confusing. That sweat retention is a cause of psoriasis has been suggested, but this needs further investigation. Studies regarding sweat composition have been studied in search for methods of treatment, such as use of fatty acids, but the results have not been convincing. The problem of the origin of skin free of fatty acids is not solved. It is important that this problem be solved in order to understand the role of excessive sweating of the foot in development of athlete's foot, or, conversely, the resistance to fungus of skin areas containing large amounts of sebaceous glands. The theories regarding the connection between dermatologic allergy and the psychic forces involved with sweat as an important mediator are reviewed. It is concluded that sweat alterations play a large part in some unexplained dermatologic phenomena, but the real significance of eccrine sweating in skin disease is yet to be determined. It is possible that the importance of sweating has been over-emphasized.

Observations on the Activity of Sweat Glands with Special Reference to the Influence of Aging, R. F. Hellon and A. R. Lind. J. Physiol. 133: 132-44, 1956.

An examination of age effects on the activity of palmar sweat glands was made under both cool and hot condition, on 12 subjects aged 18 to 23 and 12 others aged 45 to 57. Onset of sweating in response to heat took twice as long in the older group than in the younger. When the heat stimulus was increased by introduction of a short work period, there was an immediate increase in sweat output in the younger men and considerable diminishing of sweat loss on cessation of work, but in the older men the sweat output during the work period was similar to that just after work ceased. No difference was noted in the number of active sweat glands in the two

groups under cool or hot conditions. With reduction of fully active plamar glands on exposure to heat there was an associated rise in the number of partially active glands. Total reduction during cool stimulus was about 25 per cent. While no difference in the number of active thermal sweat glands was noticed between the two groups, there was considerable difference in the times of onset of thermal sweating. Whereas the young group on exposure to heat had a mean time of onset of sweating of 15 minutes, onset in the older group was 29 minutes. Apparently, activity of the sweat glands, is initiated by peripheral stimulation, and later controlled centrally by the direct action of blood temperature.

Seasonal Sweating, P. C. B. MacKinnon and I. L. MacKinnon. Nature 177: 799, 1956.

Sweating was assessed in five women aged 18 to 20, during one winter month and one summer month, according to the number of active glands in an area of skin 4mm. square immediately distal to the central whorl of the right middle finger. Basal palmar sweating was significantly suppressed in summer. Since subcutaneous injection of adrenocorticotrophic hormone suppresses palmar sweating, it is suggested that since suprarenal cortical activity increases in the summer, the paradoxical suppression is explained.

MEDICAL PRACTICE; GROUP PRACTICE

These Are the Rules for Avoiding Liability in Office Practice, Where Many Malpractice Claims Originate (Editorial). Bull. Am. Coll. Surg. 41: 169-71, 1956.

The plaintiff must prove that he has been damaged by the physician's negligence or failure to use the skill, care and judgment ordinarily exercised by members of the profession in that locality. One cause of dissatisfaction is that doctors show too little interest and concern for the patient's needs. This is particularly true in cases of referral from a family physician. Among the hazards of office routine and practice which can lead to malpractice suits are: (1) carelessness or incompetence of office assistants; (2) destructive or unethical criticism of the work of other physicians; (3) improper conduct of physical examination; (4) overoptimistic prognosis; (5) admission of failure in connection with treatment; (6) failure to suggest consultation when results are unsatisfactory, or when the patient shows signs of dissatisfaction or impatience; (7) office equipment that is obsolete or in poor condition; (8) poorly planned or executed billing procedure and excessive bills. Even with attention paid to all details of patient-physician relationship, or office practice or arrangements, a surgeon is not protected against malpractice suits if he is not careful to limit his practice to surgical problems within the limits of his qualifications.

The Practice of Medicine in an Industrial Society, W. P. Shepard. Indust. Med. 25: 201-04, 1956.

The demand for medical service in industry is increasing rapidly. The practice of medicine is affected by a number of major sociologic changes: migration from country to city and city to suburbs; and enormous demand by the public for prepaid medical and hospital care; the ruling of the courts regarding fringe benefits, including health care, in lieu of increased wages; fringe benefits combined with mounting costs of workmen's compensation. Industry has awakened to the values of an industrial medical program. Mechanism and speed have altered workers' lives, and present new environmental dangers to human structure and function. Industrial use of chemistry, engineering and physics have produced many new products and by-products which must be tested for toxic qualities. Mechanization in the homes and on farms has increased the proximity to dangerous machinery, and hazards of refrigeration; dangerous drugs, insecticides and other chemicals have increased hazards. Streams and lakes are polluted more than

ever. Products, by-products and waste products of nuclear fission are man-made hazards with potential harm to life. Mental and emotional stresses of modern living and manifold disorders arising from emotional maladjustment are of great importance in industry. The relation of physician to industry is discussed, and the physician's part in preventive medicine in industry.

MUSCULOSKELETAL SYSTEM

Talipes Equino-Varus, G. J. Garceau. Amer. Acad. Orthoped. Surg. Instruct. Course Lect. 12: 90-99, 1955.

Studies by the author now in progress show a heredity tendency in over 18 per cent of cases of this deformity. The cause is not yet known, but the author's observations reported earlier agree with Flinchum's that a primary imbalance "exists between a strong anterior tibial muscle and subnormal or agenesis peroneals." In the series here discussed agenesis was noted most frequently in the peroneal muscles. The deformity apparently is caused by several types of muscle abnormalities. Although clubfoot may be accompanied by other bone deformities, they are not present in the average type of clubfoot. The greatest number of abnormalities occur in the muscles and tendons. Some abnormalities such as degeneration of muscle fibers may be found on microscopic examination. Malpositions lead to secondary changes in the shape of bones and unless a clubfoot is corrected early these changes may prevent correction later.

Treatment beginning in the first weeks of life brings correction in the most serious cases sometimes in 3 or 4 weeks. The Denis-Browne splints are preferred for children less than 6 months old. The infant can kick his legs and maintain joint motions, and false corrections such as rocker bottom feet are less likely to develop. The splints are applied on the third or fourth postnatal day and changed every fourth or fifth day in serious cases. Each time, the foot is rotated outward a little and the bar bent slightly for correction. If correction is delayed, Kite wedged casts are tried. If still uncorrected, tenotomy of the Achilles tendon is done, followed by casts for 3 to 4 weeks; this should correct the equinus. Denis Browne splints are then put on again. Once correction is obtained, it must be maintained; the equinus will recur unless night splints are used. Denis Browne splints are worn continuously until the baby is 9 to 10 months old, when pre-walker clubfoot shoes are worn during the day. Clubfoot shoes with a bar applied are used at night. Wedged casts must be worn at the first sign of recurrence. The first 6 months are most important. Splints are not used after the first year, but plaster casts; the Kite wedged casts are designed to correct the forefoot adducto-varus. Unless this is corrected before correcting the equinus, a rocker bottom foot will result.

The causes of recurrent clubfoot are listed as follows: (1) "Failure to reduce the dislocation of the talonavicular joint, resulting in failure to derotate the calcaneus (varus), failure to correct forefoot adduction, failure to correct the equinus, and flat-top talus; (2) premature discontinuation of active corrective measures; (3) failure to use night splints; (4) negligence in performing manipulations and active exercises; (5) muscular imbalance; (6) faulty choice of shoes; (7) torsion of the tibia." The causes must be determined and proper measures taken at once. Any spurious correction must be noted before damage has occurred. The techniques are described for treatment of talonavicular joint, rocker bottom foot, anterior tibial tendon transplantation, arthrodesis, tibial torsion and plantar neuronectomy. The text is well illustrated.

MISCELLANEOUS

Why Attend Scientific Meetings? C. J. Wiggers. Circulat. Res. 4: 355-56, 1956.

Actual attendance at scientific meetings is not the chief benefit derived; the immediate judgment of reports and their impact on future research is often faulty. The greatest value is the contact with great minds and the informative talks with noted personalities whose broad experience and outlook are respected and considered of great value. Communications printed later of those men are more meaningful after meeting them personally. A talk-fest with others in small social gatherings on academic or research problems, with constructive criticism and suggestions are more helpful than formal papers. There is personal gain also through the privilege of associating with foreign colleagues at international congresses.

The Role of Welfare Agencies in Providing Services to the Aged: The Role of the Public Agency, W. J. Cohen. J. Gerontol. 11: 328-30, 1956.

The Federal Government is paying $2.5 millions monthly old age assistance payments to 6 million aged persons. State and public welfare agencies are also providing a wide range of services to the aged. The following changes are suggested in the Federal program: (1) Designation of certain funds for medical care for old age assistance to encourage additional funds for medical and home nursing care for old persons, and making available more adequate care to aged persons on assistance rolls; (2) modification of old age assistance provisions of the Social Security Act to restore aged persons to self-support and self-care; (3) authorization of Federal funds for training of state and local welfare workers to not only provide social services, but also to encourage provision by communities of old age services; (4) authorization of use of Federal funds for demonstration and research projects of national, regional or state significance. Those receiving old age assistance average 75 years in age. Many need more than average hospitalization, nursing care and other medical care. In many locations the quality and quantity of medical care is inadequate. The Federal formula providing grants for public assistance lacks necessary flexibility and sufficient incentive for the states to develop adequate medical care programs for this work. Many persons on old age rolls have unused potentialities; this accelerates physical and mental deterioration, because of boredom, frustration and unhappiness. Federal funds are also needed for the training of public welfare personnel to handle the many complex problems of the aged.

Effectiveness of Voluntary Health Insurance; Results of a Nationwide Survey, O. W. Anderson. Hospitals 30: 24-26, July 1, 1956.

A national survey was made of family medical costs in the voluntary hospital insurances to show (1) the distribution of the costs of personal hospital services among families; (2) the extent of voluntary hospital insurance; (3) the effectiveness of prevailing insurance in spreading the costs, and (4) ways of encouraging the continued growth of insurance. Tables are given to show the types of services provided, comparative costs per family and charges per individual of hospitals, physicians, dentists, of medicines, and other costs. Approximately 8 per cent of families incurred no charges during one-year period; over 10 per cent incurred charges of $500 or more for all services. The average cost per family was hospital services $190; surgery $77; "other" physicians' services $168; dental $84; medicines $91. The utilization of hospital services is also discussed. The problems facing voluntary health insurance today are expansion in terms of the people covered and expansion in terms of benefits offered on an insured or prepaid basis. The cost data presented indicate a need for greater insurance, and show proof of the need now being met.

ORGANIZATION NEWS

Secretaries of local, state, regional, affiliated, subsidiary and other related organizations are invited to submit copy for these columns.

GEORGIA ASSOCIATION OF CHIROPODISTS

At the annual scientific and business meeting of the Georgia Association of Chiropodists, the following officers were elected:

President, Dr. C. J. Pompei, Macon

President-elect, Dr. M. Wittenberg, Augusta

Secretary-Treasurer, Dr. Ernest Godwin, Valdosta

Dr. John Wilson, Savannah, Sergeant-at-Arms; Dr. Melvin Sutker, Savannah, N.A.C. Delegate; Dr. Ray Noonan, Atlanta, Alternate Delegate.

ILLINOIS CHIROPODY SOCIETY
Zone III

The quarterly meeting was held Sunday, June 9, 1957 at Peoria, Illinois. The business meeting was held in the morning. The speaker for the afternoon scientific session was Dr. G. Conrad Dahl, Chicago, Illinois. His topic for the lecture was "Selection and Fitting of Shoes and Compensatory Balancing."

NEW HAMPSHIRE CHIROPODY ASSOCIATION

The annual business meeting elections were held in Concord on June 16th. Officers elected for 1957-58 are:

President, Dr. H. V. Harrison

First Vice President, Dr. Willis H. Hoyt

Second Vice President, Dr. A. R. Brunnelle

Secretary-Treasurer, Dr. T. M. Levingston

Keynote of the meeting was the point be-

"LIFE'S FOUNDATION — YOUR BABY'S FEET" is an outstanding and comprehensive booklet on the growth and care of children's feet. Written for the layman, it is concise, cleverly illustrated and will prove valuable especially to the parents of young children. Many Chiropodists have received a copy of this booklet and have ordered them in quantity. For those of you who have not ordered and for those who wish to reorder, please clip the order blank below and mail with your check for your supply.

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ing made that each practitioner is responsible for keeping abreast with the current forward strides in concepts and techniques being made in the profession in order that the people of his community may receive the better service they demand and deserve.

Mrs. H. Harrison spoke to the ladies on "Charm."

NORTH CAROLINA CHIROPODISTS' ASSOCIATION

The North Carolina Chiropodists' Association held its annual meeting at Fayetteville, North Carolina, June 17th and 18th, 1957. Officers elected are:

President, Dr. Carlos T. Cooper, Jr.

Vice President, Dr. Eugene Weisberger

Secretary-Treasurer, Dr. D. J. Cameron

State Board Member, Dr. Robert Getchell

N.A.C. Representative, Dr. James A. Davis

N.A.C. Alternate, Dr. Basil Tucker

Region 8 Representative, Dr. W. G. Dunn

President of Women's Auxiliary, Mrs. Calvin Bruce

The association voted in favor of the change from chiropody to podiatry for the National.

The two-day meeting included business and scientific sessions and cruise. Dr. William B. Ignatoff of Newark, New Jersey, was the scientific speaker. He spoke on "Practical Dermatology-Diagnosis and Treatment."

CHIROPODY SOCIETY OF WEST VIRGINIA

The annual meeting of the Chiropody Society of West Virginia was held June 9, 1957 in Parkersburg. The following were elected to office:

President, Dr. Robert R. Maury

President-elect, Dr. H. D. Darby

Vice President, Dr. Earl Sheff

Secretary, Dr. G. M. Arnold

Treasurer, Dr. Earl Sheff

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COMMUNICATION FROM THE PROFESSION

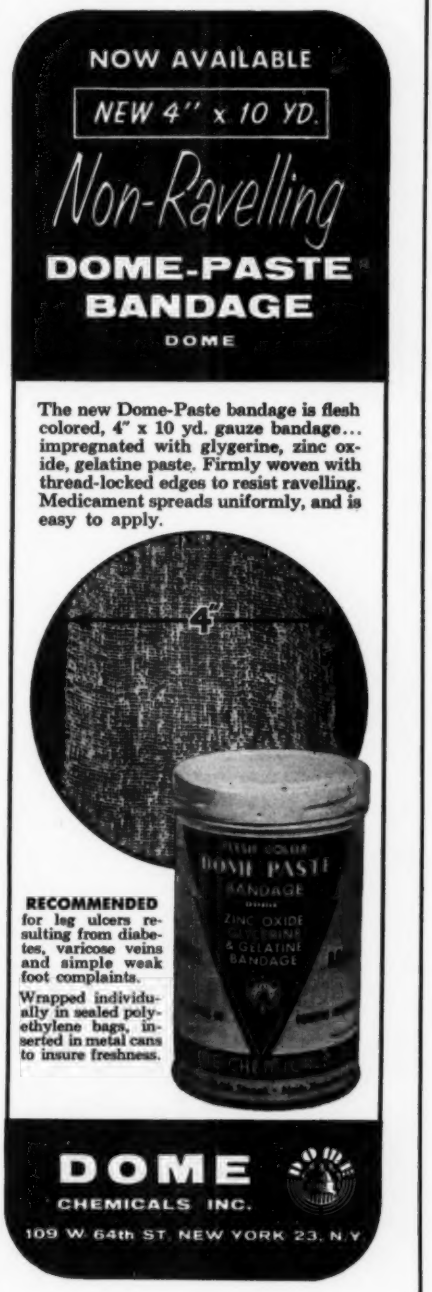
There is a line in Holy Writ which says, "Greater love hath no man than this, that a man lay down his life for his friends."

Maurice J. Lewi gave to chiropody what to many men would be a full lifetime of service. Nearly 100 years old at the time of his quiet, peaceful death, he had given close to 50 years to the task of creating a scientific, ethical foundation for chiropody and thereon building a superstructure of growth and achievement that has made it a vigorous, respected branch of the healing arts.

But this was not without sacrifice. Until he yielded to the importunities of a small group of men in New York he had filled with honor a place of power, prestige and importance in the state government of New York. He enjoyed the esteem of his political and professional co-workers and acquaintances. His income was highly satisfactory. All of this he gave up, even to the forfeiture of the regard of some of his one-time friends, to become the Moses of chiropody.

For 18 months he drew not a penny of the six thousand dollar salary he was supposed to receive from the new organization, depending for his living expenses on a hastily obtained part time position as medical director with an insurance company. These were trying days, involving conditions far different from the comfortable life he had previously enjoyed. Nevertheless, though spending long, fatiguing hours at his double job, working often into the small hours of the night, he put his very heart into the new venture.

He gave us a law, a school, a text book. He created a long range plan, looking ahead for a quarter of a century for the fruition of his plan. From the start he insisted on the highest ethical and scientific standards. By the sheer force of his personality, prodigious intellect and administra-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tive ability he inculcated an attitude through the struggling group that seemed verily to lift it by its own boot straps.

Constantly he sought recognition not only from the medical profession but also the government of the United States, ever striving to broaden the scope of our activities and create new avenues of service. He induced physicians of high repute to serve on the school faculty, usually without pay. He used his still strong influence to obtain positions in hospital clinics. He made endless trips to Washington, appearing before Congressional committees and visiting high officials in government departments, urging the induction of our practitioners into the armed forces.

No mere sketch of this kind can even faintly portray the greatness of Dr. Lewi. Some day there must be a complete biography of him, this man whose vision, wise counsel, inspiring leadership and determined, unremitting effort to lead our profession into its rightful place have made him almost literally the "father of chiropody."

The generations, one after another, have come during these years which knew not Dr. Lewi. In his declining days he felt this keenly. "They don't know me now," he said, with no hint of rancor but with a bit of a tear in his voice. "They don't know me or what I have done, how I have worked for them." And it brought to mind those words of one of Shakespeare's characters: "How sharper than a serpent's tooth are benefits forgot." But there are those among us who well knew the man and his works. Let us, therefore, see to it that neither he nor his work shall ever be "forgot." The flame that lighted before us, let it never fade and let us never cease to follow it.

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Saturday & Sunday, November 9 & 10, 1957	Seattle, Washington

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MOOD ELEVATORS

Contributions to this column are more than welcome. In fact it depends upon them.

A.O.P.

The trouble with matrimony is not with the institution. It's the personnel.

Boston Globe

Oh, I'd say my secretary is just an average-looking girl. But here, judge for yourself—I've got a picture of her here in my wallet.

Husband to spouse according to Bob Barnes

I'm going next door for a minute. Stir the soup every half hour or so.

Wife's instructions overheard by Al Kaufman

Oh, Boy! Isn't that Jane Howell gorgeous? You are, too, dear.

Husband's movie criticism according to Goldstein

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Camp Wetmore News

A woman's intuition always seems to work better when she's not driving a car.

Horizons

I don't know how the Russians do it. When I drink vodka, I say "yes" to everything.

Sweet young thing quoted in Kroehler News

A school teacher had given back to his class their examination papers.

One boy held up his hand and said, "Teacher, I can't read what you have written at the bottom of my paper."

Teacher took the paper and examined it carefully. "It says, 'Please write so I can read what you have written.' "

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"But you don't look any huskier," his friends remarked.

"Oh, but you should see the mailman," was the reply.

One thing about getting old is that you feel your corns more than you do your oats.

Fifth Amendment

"Dave, do you solemnly swear to tell the truth, the whole truth and nothing but the truth?"

"Yes, Sir."

"Now, Dave, what have you to say for yourself?"

"Well, Judge, with all those limitations you just put on me I don't believe I have anything to say."

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A smart husband is one who is not so busy bringing home the bacon that he forgets the apple sauce.

People who are worried about where the younger generation is headed would do well to consider where it came from.

The driver's license examiner was taking a test ride with an applicant. A woman driving the car ahead put her hand out the window.

"See that?" asked the examiner. "What does that mean?"

"Only one thing for sure," said the applicant. "The window's open!"

Life is a grindstone and whether it grinds a man down or polishes him up depends on the stuff he is made of.

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DEATHS REPORTED

Dr. O. J. Grundy

South Bend, Ind.

Dr. Grundy passed away June 21, 1957. He was born November 22, 1896, in Muncie, Indiana. Dr. Grundy practiced in South Bend, Indiana, for 32 years and was a member of the Indiana and National Associations and a Fellow of the American College of Foot Surgeons. He was survived by his wife, three daughters and six grandchildren.

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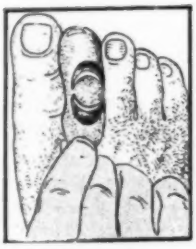

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Boston, Mass.
Sept. 13-15, 1957
Sheraton Plaza Hotel

Region Two
(New York)

Region Three
(Del., Md., N. J., Pa.)
Atlantic City, N. J.
April 17-20, 1958

Region Four
(Ohio)

Region Five
(Ill., Ind., Mich., Wis.)

Region Six
(Colo., Iowa, Kan., Minn., Mo., Nebr., N. Dak., S. Dak.)
April 11-13, 1958

Region Seven
(Idaho, Mont., Oreg., Wash., Wyo.)

Region Eight
(D. C., N. C., S. C., Va., W. Va.)
Huntington, W. Va.
*November 15-17, 1957
Hotel Pritchard
*Note change of date

Region Nine
(Florida)

Region Ten
(Ala., Ga., Ky., Miss., Tenn.)
Montgomery, Ala.
Sept. 6-8, 1957
Whitley Hotel

Region Eleven
(Ark., La., N. Mex., Okla., Texas)

Region Twelve
(Ariz., Cal., Nev., Utah)

MISSOURI ASSOCIATION OF CHIROPODISTS
Kansas City, Mo., Oct. 11-13, 1957
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